

A Cognitive-Semantic Analysis of Preposition on: An Experimental Study at University of Baghdad

Sura Muttlak Nasser

Department of English, College of Education for Women
University of Baghdad, Baghdad, Iraq

Abstract

This study is descriptive quantitative research by using a test to collect the data needed. Iraqi English as a foreign language (EFL) students face difficulties in differentiating between using prepositions correctly. This study has been performed in the Department of English at College of Education for Women, University of Baghdad, to diagnosis the difficulties of English prepositions that face Iraqi first-year students at the University since multi-uses and meanings of prepositions. For Iraqi EFL students, prepositions regarded as a problematic criterion. This study aims at examining the problems that EFL students commit mistakes in using English prepositions of place *on*. It also highlights the causes of those problems. Correct handling proposition is not because most of them have different functions straightforward, and different prepositions have the same uses. For this reason, the researcher adopted pre and post-tests to evaluate the output of the means of the students' results. The researcher used SPSS to analyze data.

Keywords: Cognitive linguistics, Iraqi EFL students, preposition, preposition on.

Cite as: 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>

Introduction

Prepositions considered significant challenges and hard to understand for Iraqi EFL students and sometimes misuse prepositions. That's because the Arabic language has its own rules, James (2007) and Jie (2008) affirm that prepositions are hard to understand for English language learners EFL because words have their constructions and regulations so that there are interference points while learning a second language. Nasser (2019) believes that English considered a big problem for non- native learners, especially to Iraqi EFL learners repositions are the core of one of these interference marks. Thus, grammatically prepositions do not use the same rule for each language. Shakir and Yassen (2015) assure that Iraqi EFL students based on their native language for translation before producing English language patterns. Aajami (2019) The perplexity faced by Iraqi second language learners (L2) due to the multi-usages of this preposition has motivated the researcher to conduct this study.

Clece- Murcia and Larsen (1999) mention that prepositions cannot behave in the same way for each language. They confirm that the L2 students find difficulty and feel confused by using English prepositions. There is a perceived contradiction in English itself (Clece- Murcia& Larsen,1999; Evans &Tyler, 2005). There are some certain prepositions that can be used in one form but not to another, for instance: *I will meet you on Friday at 5:30*, but *I will meet you at Saturday on 10:00*. One can delete the preposition *on* but cannot delete at (I will meet Saturday at 10:00). Iraqi students faced problems in understanding why the temporal prepositions applied with certain words. Iraqi students can not recognize why changing spatial prepositions can change the meaning of a sentence.

1-2. The objective of the Study

This study aims at:

- Revealing specific difficulties that Iraqi students face in using English prepositions correctly.
- Examining the Iraqi students' ability to differentiate and produce correct prepositions.
- Investigating how cognitive linguistics help EFL students' ability to understand the English preposition *on* in their writings and speech context.

1-3. Limitation of the Study:

The participants were 30 female first-year students in the Department of English, College of Education for Women, University of Baghdad. The study was conducted during the academic year 2018-2019.

1. Literature review

2-1. What is Cognitive Linguistics

English language in Iraq considered second language. To use preposition in correct way is one of the big challenge 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 that is used to treat those difficulties out of studying the English prepositions and their semantic networks according to spatial sense, spatial relations, and figurative sense. The cognitive linguistic approach gives a full investigation of 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.

Aajami (2018) affirms that the CL approach concentrates on examining language, mind, and sociocultural knowledge. It is shown clearly by its close relation of meaning and form within the study of language. Moreover, Evans (2012) identifies that language depends on two general fields of analysis: cognitive grammar, which deals with the study of language organization, and cognitive semantics, which considers the language as a means of exploring fields of conceptual structure. Tyler et al., (2011) assert that CL shows a different perspective, indicating that the many different meanings related to a specific preposition are connected in systematic ways.

The cognitive linguistics (CL) considered the central part of meaning and function in the use of language. CL has produced a pedagogical understanding of foreign language teaching. Tyler and Evans (2003) assure that the traditional teaching method of prepositions is the hardest side of the English language for EFL/ English as a second language (ESL) teachers to teach and second language (L2) students to control and understand. For instance, Tyler and Evans (2003) discovered that such theory focuses on the partial homonymy modal, where usually shows different meanings of the preposition by supporting a general connection between the spatial sense and the non- spatial extensions. Song (2013) examines an experimental group by using the CL approach through learning prepositions comparing to the control group using the traditional method, containing the use of pictures and images to describe the various meanings of prepositions. The study concluded that the experimental group achieved better in using prepositions. Tyler et al., (2011) concentrate on the involvement of the cognitive semantic approach within CL for the teaching of English prepositions. Tyler et al., (2011) assert that the CL- inspired approach showed significance in teaching the semantics of English prepositions on 14 advanced Italian students of English, whom they show notable acquisition between the pre-test and post-test. This study shows the cognitive semantic approach gives intuitive teaching and learning cases supporting students to evaluate the cross-linguistic variation that would be critical to first language (L1) interference.

2-2. What is preposition?

To use preposition properly is one of the critical problems faced by Iraqi EFL students. Correct handling of a preposition is not easy because most of them have different functions, and different prepositions have the same uses. Prepositions considered the most regularly used linguistic classification in English because they behave as relations between two unites, most commonly producing preposition phrases and supposing many semantic functions. (Quirk, 1985; Kenndey, 2003; Biber et al., 2002). Similar to Parrot (2000), when he assumed that prepositions are "major problems" for learners. Koffi (2010, p. 233) argues that prepositions are polysemous, which have semantic properties of words that have multiple meanings. He confirms that most prepositions in English have different purposes relying on context. That's why Iraqi EFL students feel confused when trying to decide the prepositional meaning and use them correctly. Cele- Murcia (2001) affirms that non- native speakers of English commit many mistakes in using prepositions by choosing incorrect prepositions, deleting needed preposition, and using extra prepositions were not required. Like Alkhotaba (2013), when argued that Arab ESL learners make mistakes while using the prepositions *in* and *on* correctly. This indicates why and how prepositions are applied in English, and a few of the sources preposition cause problems for Iraqi students.

AL- Bayati (2013) assumes that EFL Iraqi students face tow troubles in using prepositions. Iraqi students cannot understand if a preposition is required in a structure, and which preposition

should be used where one is needed. EFL students depend on their mother language in learning English prepositions; this has happened since the EFL students try to join the prepositions in the English language with the prepositions that found in their mother language.

Ibrahim et al. (2018) mentioned that as SL users, prepositions are always misused, especially those showing time, place, and the relation between two unites within the context transference. Parrot (2004) considered prepositions as a piece of the smallest word, which named them relational words. According to Mus (2012, p. 3), prepositions are words that show the connection between the words in one sentence. Prepositions have an essential role in teaching and learning English. Mus (2012, p.3) argues that it is not easy to use prepositions properly in a foreign language cause each English preposition has different uses, and these may agree to several different prepositions in any other language. Also, different prepositions have the same applications, for example, (*on* Friday evening at night/ in the evening).

2-3. Semantic Analysis of the Preposition *on*

This section highlights the semantic analysis of the preposition *on* as developed by Tyler and Evans (2003). The cognitive semantic analysis may help to control the confusion that happened because of the polysemous quality of the preposition *on* and acquire correct comprehension of its uses and items.

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 of these examples has different meanings or senses, while these senses are though 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 proposition. Sotiloye et al., (2015) mention that the Proto- Type Approach dealing with "teaching words in an explanatory and semantically-based manner." This shows that in the case of prepositions, especially the spatial, physical meaning is going to 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 preposition depending on the analysis of the prototypical meaning, but all non- prototypical meanings can be connected to the prototype during metaphorical expanding. (Lindstromberg, 1996: 228).

Evans and Tyler (2005) assert that prepositions have central meaning, which leads to the mental view of spatial relation. When the central meaning of preposition occurs, it can be said that the diversity of the different meanings in a polysomic network called by Evans and Tyler (2005) semantic *network* This leads to the view that different meanings can be produced within the central meaning and are consistently related to that meaning. Those various meaning will be organized in a web, or network, dividing from the central meaning.

Prepositions are usually hard as polysemous factors with various but close meanings and senses. According to Yunns and Auwab (2012), cognitive semantics shows the figurative senses of preposition, which is expanded from its spatial sense during conceptual metaphors and idiomatic expressions.

Spatial connections are mainly used with prepositions, that clarified a conceptualized spatial connection between a focus element (F) and a locating or ground element (G) (Tyler et al., 2011, p. 184). This connection called the trajectory (TR) and the landmark (LM) connection by Langacker (2008), which creates abstract spatial views which "presuppose the normal horizontal/vertical dimensional grid... calculated in relation to 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 adopted to form an abstract connection. For example, *the cup of the tea is on the desk*. The spatial sense in this sentence shows that there is 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 of "the cup of tea is on the desk" can vary according to the viewer's primary 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 draw a conclusion that there are not any similar advantages figures. Hence Tyler and Evans (2003) assume that the technique a viewer examines the physical vantage items of spatial sense can be identified the technique that one can clarify due to one's conceptualization.

Tyler and Evans (2003) realize that the central meaning of *on* produces a spatial sense between two close objects as in the following example: *the pen is on the chair*. Here, functional sense occurs when the Focus (F) element is a human. Where there is a human performing *on* an inanimate object, so this human is performing for a particular reason. That means there is a co-location for the person and the inanimate object. But the focus element F (the person) deals with the Ground (G) element. For instance, *Tom is on the table*; here the prototypical configuration contains a functional connection between Tom and the table. Spatial connections are indicating with prepositions that explained a conceptualized spatial connection between F and G.

Semantic difficulty causes confusing for Iraqi students through they are directed by word meaning. For example

Table 1. *sentences of the polysemy of preposition on (set by the researcher)*

	Sentences	Meaning of preposition
1	The picture is on the wall	On expresses surface
2	Dana is going to meet her brother on Friday	On expresses day
3	Your friend is on the phone right now	On expresses machine or device
4	The ball hit him on his head	On expresses a part of the body
5	My cousin's house is on fire	On expresses the state of something

Indicating these examples, involving the preposition *on*, whose prototypical meaning is "contact with surface", furthermore, these examples are not participating in the same meaning.

2. The Experiment

The experiment of this study aims at identifying the difficulties faced by Iraqi students. Also, to perform the preposition *on* in the light of CL insights. The researcher guided an experimental group design of pre-test and post-test to evaluate the experiment. To achieve this aim, the researcher follows the following steps:

- 1- Clarifying and explaining the meaning of English preposition more regularly.
- 2- Graphic cards, visual aids, and pictures with exercises and examples used to clear and explain the spatial sense of the preposition.
- 3- Answering a test to evaluate the students' correct choice of preposition.
- 4- Results of pre-test and post-test were quantitatively achieved by using the statistical program SPSS.

3. The Research Instrument and Procedure

Written tests were employed in this study, to collect reliable data. Pre-test and post-test were constructed to measure students' performance. The tests contain images to be analyzed twenty multiple-choice sentences.

4. The population of the study

The participants were thirty female first-year students in the Department of English, College of Education for Women, University of Baghdad, Iraq. The study was conducted during the academic year 2018- 2019.

5. Pre-test

The focuses on measuring the students' efficiency in using the preposition *on*, to recognize the difficulties faced by the students of the Department of English, College of Education for Women, University of Baghdad, in using correct English preposition. Results of pre-test were thirty marks collected by the researcher. The score showed that the students failed in differentiating among the usage of *on* and other prepositions. The score exposed that the participants unable extremely exploring the spatial sense or even giving the spatial relations or figurative sense of the preposition within a sentence. The concluded score shows that the participants based on their former concept of the preposition and its uses. Besides, the participants do not succeed in recognizing the spatial sense or discover the structures entities in the sentences or pictures. They also make a mistake in choosing the correct choice in the multiple-choice question with the correct preposition.

6. Post-test

Six weeks of discussion and explanation were spent to discuss and clarify the meaning of preposition and cognitive linguistic approach. During this period, the students watched some videos which define the cognitive linguistic approach, worked in groups and were asked to give examples and explain them. The researcher shows the participants pictures and asks them to interpret these pictures and identify the spatial sense and connections noticed in each picture. Then, when it was time for the test, the participants achieved the same task but separately. The results of the post-test showed noticeable progress in analyzing the spatial senses. They were able to recognize *on* among other prepositions; they were able to choose the correct choice in multiple-choices questions.

7. Discussion

The following table shows a comparison between pre-test and post-test results. The marks are not mentioned here to save space. SPSS statistical editor was used to analyze the collected data in both tests.

Table 2. The difference between the pre and post- tests.

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	pretest	9.1667	30	5.35037	.97684
	posttest	14.4333	30	3.99727	.72980

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	pretest & posttest	30	.825	.000

Note: If the differences between both tests are less than (0.5), then the study is invalid if the differences are more than (0.5) then the study is valid.

Table 2 presents the number of students which is thirty, and their average in the pre-test is 9.1667, and the post- test, which is 14.433. The students show progress of 5.266 marks. Hence the difference between the two means of both tests showed a progress which was more than (0.05), so, this study is valid.

Progress in identifying the spatial sense and connection formed by this preposition, and identifying pictures and images that have the preposition in questions. 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 were able to formulate the figurative sense to get from the spatial sense.

8. Results and Findings

The findings of this study after the analysis of data collected from thirty participants showed that Iraqi students face difficulties in using English preposition in general and the preposition *on* in particular. As shown in Table 2 for the use of *on*, the number of the students is 30, and their average in the pre-test is 9.1667, and in the post-test is 14.433. Progress has been noticed on students thirty marks. The distinction between the two means of pre and post-tests expresses a development that was more than (0.05); thus, this study is valid. Therefore, the results of this study are in correspondence with the research of Evans and Tyler (2003).

On the other hand, the cognitive-linguistic approach suggests a noticeable positive change within students' understanding of English prepositions. The experiment tries to change the students' view in recognizing the preposition *on*. On this view, it enhances their information to

understand the meaning of English prepositions in various ways. It can develop the students' ability to use the schema diagram and recognize the entities, spatial and non-spatial connections. It can be said that the CL approach can reinforce the conceptual way of thinking.

The results of both tests showed that the cognitive linguistic approach has an important role and significance effectiveness. It can be considered a new approach, unique, and convincing with new trends in clarifying the meaning. The cognitive linguistic approach shows a better account during learning English prepositions than that of the traditional methods while acquiring the second language. In other words, CL expresses the individual conceptualization of senses.

9. Conclusion

This study concludes that:

- 1- English prepositions cause EFL learning difficult and consider problematic for Iraqi students.
- 2- Using CL approach in explaining the meaning of the English preposition *on* shows effectiveness.
- 3- Cognitive linguistic aims to raise awareness of preposition and SL acquisition.
- 4- Cognitive linguistic cannot be denied or disregarded.

About the Author

Sura Muttlak Nasser is an instructor of linguistics at the Department of English, College of Education for Women, University of Baghdad. Her major research interests involve English language studies, and applied Linguistics. ORCID: <https://orcid.org/0000-0003-0267-9865>

References

- Aajami, R. F. (2018). Applying Cognitive Linguistics to Enhance the Semantics of English at: An Experimental Study (Baghdad University). *International Journal of English Linguistics*; 8, (6) doi:10.5539/ijel.v8n6p185
- Aajami, R. F. (2019). A Cognitive Linguistic Study of the English Preposition 'in': An Experimental Study (Baghdad University). *Journal of College of Education for Women*, Vol.30 No. (3) DOI: 10.36231/coedw/vol30no3.14
- Al-Bayati, W. A. (2013). Errors Made by Iraqi EFL Undergraduates in the Use of Prepositions. *Bulletin of the Transylvania of Brasov Series IV: Philology and Cultural studies*. 6(55) (122).41-56
- Biber, D., Stig J., Leech, G. (2000). *The Longman Grammar of Spoken and Written English*. Essex: Pearson Education Limited.
- Celce-Murica, M. & Larsen-Freeman, D. (1999). *The grammar book: An ESL/ EFL teacher's course* (2nd ed.). Heinle & Heinle Publishers.
- [Celce-Murica, M. (2001). *Teaching English as a Second or Foreign Language*. 3rd Edition, Heinle & Heinle Publisher, Boston.
- Al-Khotaba, E. (2013). Errors in the Use of Preposition and Adverb Particles by Arab ESL Speakers: Performance, Analysis Perspective. *International journal of Linguistics* 5 (1), 273-282; Doi: <https://doi.org/10.5296/ijl.v5i1.3310>
- 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.

- 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.
- 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
- James, M. (2007). Interlanguage Variation and transfer of learning. *International review of Applied Linguistics in Language Teaching*, 45, 95- 118.
- Jie, X. (2008). Error Theories and Second Language acquisition. *US- China Foreign Language*, 6(1), 35-42.
- Kennedy, G. D. (2003). *Structure and Meaning in English: A Guide for Teachers*. Harlow: Pearson Longman.
- Koffi, E. (2010). *Applied English Syntax: Foundations for Word, Phrase, and Sentence Analysis*. Dubuque, Iowa: Kendall Hunt Publishing Company.
- Langacker, R. W. (2008). *Cognitive Grammar: A Basic Introduction*. Oxford: Oxford University Press.
- Lindstromberg, S. (1996). Prepositions: Meaning and Method. *ELT Journal*, 50(3), 225- 236.
- Mueller, C. (2016). A Semantic Account of the English Preposition FOR Based on a Cognitive Linguistics Framework. *The Bulletin of the Faculty of Humanities*, 53, 1- 24.
- Mus, Musliyanti. (2012). *The Students' Ability in Using Preposition "A Case Study at Faculty of Letters of Hasanuddin University"* (Doctoral Dissertation). Retrieved at 23/ 4/ 2019.
- Nasser, Sura, M. 2019. Iraqi EFL Students' Difficulties in Writing Composition: An Experimental Study (University of Baghdad). *International Journal of English Linguistics*. 9; (6); 178- 184. DOI:10.5539/ijel.v9n1p178
- [21] Parrot, M. (2000). *Grammar for English Language Teachers*. Cambridge: Cambridge University Press.
- Parrott, R. (2004). Emphasizing "Communication" in Health Communication. *Journal of Communication*, 54, 751- 787. https://doi.org/10.1111/j.1460-2466.2004.tb02653.x
- Quirk, R. (1985). *A Comprehensive Grammar of the English Language*. London; New York: Longman.
- Rice, A. S. (1992). *Polysemy and Lexical Representation: The Case of Three English Prepositions*. Edmonton, Canada: University of Alberta.
- Shakir, H., & Yaseen, B. H. (2015). Acquisition of English Prepositions among Iraqi Secondary School Students in Kuala Lumpur- Malaysia. *Advances in Language and Literary Studies*. . 6; (5). doi:10.7575/aiac.all.v.6n.5 .157
- Song X (2013). *A Cognitive Linguistics Approach to Teaching English Preposition* Ph.D Dissertation
- Sotiloye, B. S. Bodune, H, & Olayemi, O. (2015). English Language Prepositions: An Albatross for English Language Learners in Nigeria. *International Journal of English and Literature* 6(6) 103- 108. DOI: 10.5897/IJEL2015.0783
- Tyler, A. & Evans, V. (2003). *The Semantics of English Prepositions: Spatial scenes, Embodied Meaning and Cognitive*. Cambridge: Cambridge University Press.
- 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.
- Yunus, K., & Awab, S. A. (2012). The Effects of the Use of Module- based Concordance Materials and Data- driven Learning (DDL) Approach in Enhancing the Knowledge of Collocations of Prepositions among Malaysian Undergraduate Law Students. *International Journal of Learning*, 18(9). doi.org/10.18848/1447-9494/CGP/v18i09/47758