Cognitive Linguistics: Application And Implications As An Approach For Teaching In ESL And EFL Contexts

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Abstract

Cognitive linguistics is an interdisciplinary approach that links language and thought and treats language as a function of mind. In contrast to traditional approaches to language teaching in ESL and EFL contexts, cognitive linguistics is a comparatively modern approach that evolved in 1970s. This paper is a review article that attempts to review the effectiveness of cognitive linguistics so far, in enhancing learners’ outcomes when applied in ESL and EFL contexts. It endeavors to bring to light the findings of studies that deal with the application of cognitive linguistics in relation to various aspects of English language teaching like teaching of English conditionals or conditional phrases, teaching of metaphor, preposition acquisition in ESL context, applying cognitive linguistics to pedagogical grammar, instructed L2 learning and application of Cognitive Linguistics in combination with other theories etc. for enhancing learning outcomes of ESL learners. Moreover it also attempts to foresee the constructive role of cognitive linguistics in teaching language in ESL and EFL contexts in the coming times. In the end, some implications for future research in the field of cognitive linguistics and English language teaching are given.

Keywords: Cognition, ESL, EFL, ELT, Learning outcomes

Introduction

What is Cognitive Linguistics?

Cognitive Linguistics is the study of language in its cognitive function, where cognitive refers to the crucial role of intermediate informational structures in our encounters with the world.
(Geeraerts & Cuyckens, 2012). Cognitive linguistics deals with these informational structures that are assumed to be present in the mind and forming a link with the outside world.

**Background**

Cognitive linguistics is an interdisciplinary approach that links language and thought and treats language as an aspect or phenomenon of mind.

In contrast to traditional approaches to language teaching in ESL and EFL contexts, cognitive linguistics is a comparatively modern approach that evolved in 1970s as a new paradigm challenging the Generative Grammar of Noam Chomsky.

**Theories/frameworks associated with Cognitive Linguistics**

Key proponents in the field of Cognitive linguistics are as follows:


This article is an attempt to bring to light beneficial aspects of cognitive linguistics in terms of its various notions and their implementations that have proved to be helpful in enhancing learning outcomes in the fields of ESL/EFL and thus can be pedagogically productive.

**The controversy:**

**Cognitive Linguistics or cognitive linguistics. Capitalized initials or uncapsualized initials?**

A review of the relevant literature reveals that the capitalized initials form of the term i.e., Cognitive Linguistics (CL) refers to the approach of cognitive grammar proposed by Ronald W. Langacker whereas the form of the term without capitalized initials i.e., cognitive linguistics refers to all other approaches that consider natural language as an aspect of mind. Thus cognitive linguistics is a broader term encompassing all cognitive approaches to language including Cognitive Linguistics (CL).

However, even within the domain of Cognitive Linguistics, we find various notions interconnected to each other in one way or another. This broad spectrum of ideas led Geeraerts (2006) to epitomize Cognitive Linguistics as an “archipelago” instead of an island on account of its different notions forming a sort of amalgamate comprising of cognitive grammar, prototype theory, schematic network, conceptual metaphor, and image schema to name a few from at least twelve distinct notions that come under the umbrella of Cognitive Linguistics. Likewise, as regards to a framework also, no distinct framework is characteristic of CL rather it can be better understood as a collection of inter-related approaches/theories.
As far as specificity of CL with cl is concerned, it relies on a fundamental notion that forms the central conception of CL and four principles that further elaborate the basic notion. The basic principle lays emphasis on semantic aspect of language i.e., language is wholly concerned with meaning whereas the four beliefs characterize nature of linguistic meaning as perspectival, dynamic and flexible, encyclopedic and non-autonomous, and usage-based and experientially grounded (Geeraerts, 2006).

The usage-based aspect of CL is significant and has developed historically. The stress on treating de Saussure’s “langue” and Chomskyian “competence” (the concepts that focus on a native’s linguistic knowledge) as being isolated from their respective concepts of “parole and performance” (the notions dealing with actual production and use of language by the speaker) has been a matter of long run debate in the 20th century among scholars till it was challenged by the usage-based approach of language. This linguists propounding this approach stressed on the interconnectedness of the above mentioned two aspects and argued that knowledge of language (langue/competence) is assembled in a speaker’s mind on the basis of his/her actual use of language i.e., parole and performance (Diessel, 2017).

**Cognitive Grammar**

The perspectival nature of meaning encompasses aspects like implementation of various types of semantic construal, imagery, conceptual perspectivization by a language and deals with two basic concepts: cognitive grammar and grammatical construal. The dynamic aspect of meaning is concerned with the process of meaning extension. The encyclopedic nature of meaning explores the interdisciplinary connection of language with various cognitive abilities. The usage-base aspect of meaning focus on the association between syntax and lexicon along with language acquisition.

Cognitive Grammar is a term that represents Langacker’s conception of language in which he equates language to meaning and conceptualization. He argues that grammar is not a combination of peculiar grammatical rules and lexicon of a language instead it is formulated by “symbolic units” that correspond to a traditional pairing of a form and a meaning. These are abstract entities for instance when noun is related to thing and verb to process (Geeraerts, 2006).

**Conceptualization**

Diessel (2017) includes conceptualization among the three arenas of cognitive and social phenomenon (the other two being social cognition & memory and processing) in the context of usage-based approach of language. Conceptualization is regarded as a tool that formulates the meaning (Langacker, 1991; Talmy, 2000 as cited in Diessel, 2017). It thus helps in enhancing the understanding of semantic aspect of language.

Language as a whole exists as form-meaning pairings (Langacker, 2008, as cited in Jacobsen, 2018) implying that all linguistic entities (morphology, syntax and vocabulary/lexis) convey some aspect of meaning and exploring these aspects of meaning parallels with examining basics of conceptualization of an event or entity.
Cognitive Linguistics (CL) and Generative Grammar

Cognitive Linguistics (CL) is compared with Generative Grammar on account of the fact that it came as a newer approach as regard to cognitive aspect of language that defied the prevalent cognitive view of language in relation to the generative grammar of Noam Chomsky. However, there do exist some similarity between the two approaches. Geeraerts and Cuyckens (2012) comparing and contrasting the two approaches point out that proponents of both approaches believe in mental representation of knowledge and in mental structures comprising knowledge given their cognitive origin. However, they differ on account of the perspective with which knowledge is viewed.

“Cognitive Linguistics is interested in our knowledge of the world and studies the question how natural language contributes to it. The generative linguist, conversely, is interested in our knowledge of the language and asks the question how such knowledge can be acquired given a cognitive theory of learning.”

(Geeraerts & Cuyckens, 2012, para. 10)

They further conclude that “what holds together the diverse forms of Cognitive Linguistics is the belief that linguistic knowledge involves not just knowledge of the language, but knowledge of the world as mediated by the language” (Geeraerts & Cuyckens, 2012, para. 14).

Some basics concepts

Trajector and Landmark

Trajector (TR) and landmark (LM) are basic concepts in CL that are used to position one entity in relation to another and are equated with two respective significant notions of Gestalt psychology i.e., figure and ground. Evans (2007) defines trajector (TR) as “(T)he focal, or most prominent, participant in a profiled relationship”. On the other hand, a Landmark (LM) is “(T)he secondary participant in a profiled relationship” where a profiled relationship is “a linguistically encoded relationship between two or more participants in a given scene” (Evans, 2007). Langacker, (2008) elaborating this mentions “Trajector and landmark are characterized dynamically as the first and second reference points evoked in building up to the full conception of a profiled relationship”. For instance, in the sentence “The balloon flew over the house”, the balloon is TR and the house is LM.

Applications of Cognitive Linguistics (CL) as an approach for teaching in ESL/EFL contexts

Now we will discuss some of the applications of Cognitive Linguistics as an approach for teaching in ESL/EFL contexts particularly as regards to teaching of polysemous concepts like prepositions, conceptual metaphors, English conditionals, vocabulary memorization and using CL in combination with other related theories for obtaining beneficial results in L2 learning.

Effectiveness of Cognitive Linguistics in teaching of English Prepositions
Learning certain complex concepts in English like prepositions prove to be quite problematic specifically for non-native speakers of English who struggle to learn English as a second or foreign language. Multiple factors are involved in this regard. For instance, the difficulty for such learners seems to arise due to their non-native background (Al Emam, 2019). Moreover, the polysemous nature of English prepositions and multiplicity of contexts influencing their understanding is also a factor. Also, the intricacy of multiple extended meanings associated with prepositions also poses difficulties to L2 learners. Tyler (2012) mentions no less than sixteen mostly distinct meanings that have been evolved from a single preposition “over”.

Therefore several depictions can be made from a single preposition, the following figures show only two of these. Fig. 1 shows manifestation of over along a straight path like “The kite flew over the house” whereas Fig. 2 shows depiction of over as “above and across” something for instance, “The cat climbed over the wall”.

![Figure 1](image1.png)

Figure. 1 The meaning of “over” along a straight path

![Figure 2](image2.png)

Figure. 2 The meaning of “over” as ABOVE and ACROSS

Such difficulties, in particular, are observed when rote memorization or traditional method is employed for teaching of prepositions. Contrastively, cognitive linguistics appears to be a better strategy pedagogically for enhancing learning outcomes of prepositions.

Employing concepts of cognitive linguistics like spatial and time meanings has proved to be beneficial in enhancing understanding of meanings of various prepositions in relation to different concepts.

Al Emam (2019) conducted a study involving sixteen Arabic-speaking learners who were divided into two groups: one receiving cognitive linguistic activities for the prepositions “to” and “for” and the other receiving traditional instruction based on rote memorization. The group receiving cognitive linguistic activities was instructed regarding the spatial and time meaning for the prepositions and also for their combined use with adjectives in spatial sense. The findings showed that the group that had taken instructions related to cognitive linguistics and underwent cognitive linguistic activity performed better than the other group receiving traditional instruction. This
indicated that cognitive linguistics is a better teaching approach for teaching of English prepositions.

Wong, Zhao, and Mac Whinney (2018) conducted a pretest posttest based experimental study exploring the impact of employing schematic diagrams based on cognitive linguistics on the teaching of English preposition through English preposition tutor, a computer based tutorial system. A total of sixty-three English language learners at intermediate level participated in the study and were divided into three experimental groups and one control group. Each experimental group received a single kind of feedback from schematic diagram, metalinguistic rule or correctness feedbacks. Among the three feedback groups, the schematic diagram feedback group was the only group that was shown the spatial and nonspatial aspects of the polysemes of selected prepositions. Translation and cloze tests were applied. It was revealed that as far as dealing with nonspatial prepositional polysemes was concerned, schematic diagram feedback proved helpful for learning as compared to corrective feedback as depicted by the translation test. However, as regards to cloze test, learning outcome through traditional feedback was similar to cognitive linguistic instruction. The study concluded that extensive feedback based on some of the basic concepts of cognitive linguistics like schema, trajector and landmark has a potent advantage in creating a profounder understanding of mental representations associated with discrete prepositional senses particularly in relation to their interconnectedness.

Tyler, Mueller, and Ho (2011) in a quasi-experimental study examined the effect of instruction based on cognitive linguistics on the L2 learning of three English prepositions: to, for and at in terms of their sematic aspects. A total of fourteen advanced learners participated in the study. Pre- and post-tests were conducted. Findings indicated that the group of learners that received cognitive linguistics based instruction showed considerable enhancement in their learning of the various semantic aspects of the three prepositions.

Effectiveness of Cognitive Linguistics and Conceptual Metaphors

Before giving an overview of studies that highlight the effectiveness of Cognitive Linguistics and conceptual metaphors, it is important to discuss some of the key notions of Conceptual Metaphor Theory.

What is Conceptual Metaphor Theory?

Metaphorization is among key notions of cognitive linguistics. In this regard, Conceptual Metaphor Theory (henceforth CMT) is amongst the most notable developments. It was proposed by George Lakoff and Mark Johnson in “Metaphors we live by” published in 1980. The theory primarily challenges the traditional conception of metaphors from being merely ornamental entities in literature used to produce rhetoric effects and highlights their importance as tools in organizing our mental concepts related to everyday phenomena and as being integral to our thought and performance in addition to language (Lakoff & Johnson, 1980). Thus, CMT regards a metaphor, more precisely a conceptual metaphor, as a mental process involved in considering one
area in relation to other. “The essence of metaphor is understanding and experiencing one kind of thing or experience in terms of another” (Lakoff & Johnson, 1980, p. 455).

**Source domain and target domain**

The conceptual arena from which a metaphorical manifestation is extracted to relate to another conceptual arena is the “source domain” whereas the one construed in terms of the source domain is regarded as the “target domain” (Nordquist, 2020).

Lakoff and Johnson (1980) elaborating the metaphorical basis of concepts that exist in one’s mind give example of the concept ARGUMENT having the conceptual metaphor ARGUMENT IS WAR. They elaborate that though both argument and war are different types of entities, the concept of argument, the activity and the linguistic expressions associated with it get metaphorically structured in relation to aspects of war. This is a commonly experienced phenomenon of everyday argument-based interactions where we come across sentences like “His criticisms were right on target” or “I demolished his argument” etc. This implicates that our culture-based understandings of a phenomenon also play role in shaping the related conceptual metaphors. Nordquist (2020) discussing the rationale of use of conceptual metaphors, highlights the significance of established culture-based understandings related to various phenomena of life and also points out the systematicity in conceptual metaphors on grounds of a structural association that exists between the source and target domains.

**Mappings**

Relating a target domain in terms of a source domain involves an assortment of established conforming points between the two domains and such assortments are regarded as mappings (Nordquist, 2020).

Now we will discuss some practical applications of CMT in relation to ESL/EFL learning contexts as follows:

Hua (2020) in a Chinese study, investigated college level vocabulary learning from three perspectives i.e., polysemous words, idiomatic expressions and word connections by employing some key concepts from CMT like conceptual metaphors, source domain, target domain and cross-domain mappings forming a cognitive link between source and target domain. The study concluded that employing concepts from CMT in vocabulary learning lessens learners’ cognitive burden involved in memorizing words on the one hand while on the other hand drives them towards absorbing new vocabulary by making memorization easier through similar thematic groups.

Abdulla (2020) in a study, examined the ways in which the pandemic Covid-19 had been metaphorized in some of the main online English and Kurdish newspapers. It was revealed that the linguistic entity of Covid-19 had been associated with various conceptualizations like WAR, FIRE, REVENGE, DARKNESS JOURNEY, etc. in different online articles on the basis of factors
like difference of contexts of the issues involved in various articles, the cultural aspect and the idiosyncrasies of experience related to the pandemic.

**Effectiveness of Cognitive Linguistics in enhancing L2 Learners’ Vocabulary Memory**

Cognitive linguistics has not only proved to be effective in the understanding of intricate concepts in English language like polysemy of prepositions but has also demonstrated itself to be equally useful as an approach in boosting English language learners’ vocabulary memory.

Ya, Haiyan, and Chuanguo (2020) developed a vocabulary of 1023 words based on three basic concepts derived cognitive linguistics i.e., classifying the words into categories, image schemas and conceptual metaphors. In this experimental study, two groups were formulated (experimental and control) of thirty participants each. The experimental group was made to memorize thousand words as a memory task based on the abovementioned vocabulary derived through cognitive strategies while the control group was asked to pick certain non-specific vocabulary learning books that could aid in developing memory for a period of one month. Tests were applied to check the short-term and long-term memory of the participants in the first and third week respectively at the end of one month. Findings revealed that long-term memory of the participants considerably improved in the experimental group. This implies that principles and strategies of cognitive linguistics can be fruitfully employed in improving vocabulary learning of the English language learners specifically as regard to development of their long-term memory.

**Effectiveness/Efficacy of Cognitive Linguistics in teaching of English Conditionals**

English conditionals are amongst the most difficult areas of grammar to be mastered by L2 learners. The significance of mother tongue in influencing the understanding of L2 grammar structures cannot be denied as highlighted by Tuan (2012) in a survey questionnaire-based study. However, teaching of English conditionals has not been an easy task also on account of internal intricacy and absence of appropriate explanations of meanings and perspectives associated with conditionals in many grammar books available for teaching L2 (Jacobsen, 2018). Contrastively, cognitive linguistics based instructional strategies deal with such complex entities like if-conditional constructions not only by establishing an explicit understanding of their meanings but also elaborating their usage in accordance with a peculiar context (Jacobsen, 2015).

Jacobsen (2018) conducted a quasi-experimental research on the efficacy of cognitive and task-supported instruction on L2 development of participants as regards to teaching of English hypothetical conditionals. The study made use of cognitive linguistic analysis of English conditionals from the research of Dancygier and Sweetser (2005) based on theory of conceptual blending proposed by Fauconnier and Turner (2002). There were two experimental groups (cognitive and task-supported) and a control group. Each experimental group was given three teacher-facilitated PowerPoint presentations and six pedagogic tasks. The cognitive group received meaning-centered and compositional reality of language in their first presentation given in the first week of instruction. The second and third presentations in the subsequent weeks focused
on the underlying meanings of English tenses along with the related semantic configurations and on the influence of contexts in formulating the tense of both clauses of conditionals respectively. Development of L2 was assessed through a post-test and a delayed post-test. The study revealed that both treatment groups showed development in L2 but for the cognitive group, improvements in L2 learning related to understanding of conditionals were virtually twice that of the task-supported group. Findings of this study thus imply that a combination of cognitive and task-supported instructions can be beneficial in making the understanding of conditionals easier for L2 learners.

Effect of using CL in combination with theories like Vygotsky’s sociocultural theory (SCT)

What is Vygotsky’s sociocultural theory (SCT)?

Vygotsky’s sociocultural theory (SCT) is concerned with developmental aspects of language of children. Vygotsky regarded internalization of learning through social interactions in cultural contexts to have an effect on the growth of more complex human cognitive functions (Masuda & Arnett, 2015).

Fazalehaq and Aleem (2020) in their discussion of efficacy of various CL theories in relation to second language acquisition (SLA) conclude that application of these theories as instructional strategies has not only proved to be valuable for improving learning outcomes but beneficial aspects of their use get enhanced when CL is employed in combination with other related theories like Vygotsky’s sociocultural theory (SCT).

In another study, Jacobsen (2015) interviewed seven L2 learners to explore their views as regards to combined use of CL-based instruction and collaborative activities based on Sociocultural Theory (SCT) for enhancing their understanding of English conditionals. Out of these, four underwent CL-based instruction and three were given non-CL instruction while all participated in tasks based on SCT. The study revealed that learning outcomes associated with understanding of conditionals of the cognitive group were much better than those of the non-cognitive group. Moreover, an analysis of the interview-based qualitative data of the cognitive group brought to light learners’ admiration of the cognitive mode of learning on ground of effectiveness of its visual content like videos, PPTs, etc. This implies that cognitive instructional strategies in combination with SCT can produce fruitful results as far as learning of English conditionals is concerned.

Conclusion, Implications and recommendations of CL as an approach in the fields of ESL/EFL learning and teaching

A review of the various developments in the field if CL and its applications in ESL/EFL contexts reveals that various notions of CL can be helpful in enhancing learning in ESL/EFL contexts. For instance, in contrast to rote memorization or other traditional strategies, employing cognitive linguistics strategies in EEL/EFL contexts can be helpful for learners in augmenting their understanding of:
Polysemous aspects of words in general and prepositions in particular.

Interconnectedness of meanings and concepts.

Extension of meanings.

Variety of contexts

Metaphor associated conceptualizations of a phenomenon

Vocabulary and Long-term memory development

Moreover, combining strategies from other theories like Vygotsky’s sociocultural theory (SCT) with Cognitive Linguistics (CL) are significantly helpful in augmenting learning outcomes of ESL learners. Such combinations if included in curriculum designing of ESL learners even at the beginner level can yield productive learning outcomes.

References


