

RESEARCH ARTICLE		Teaching Cognitive Grammar	
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Abstract			
Linguistic sciences have contributed significantly to the theorization of grammar teaching. It is well known that grammar is one of the challenging sciences that students often struggle to understand. Despite ongoing efforts to present grammar in an acceptable form, a cognitive approach emerged by Langacker, countering previous theories with a new theorization based on semantics, mental concepts and operations, or on verbal structures whether they are phonetic, morphological, syntactic, or pragmatic. This cognitive approach can be invested in grammar teaching, leading to the following questions : What is this cognitive approach that underpins grammar teaching? How can it be utilized to advance grammar lessons?			
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Introduction

Language is a source of strength for researchers, driving them to delve into its depths. Its flexibility allows researchers to explore vast fields and specializations. Cognition emerged to continue linguistic studies with its mental theorization. It is "a summary of the mind in many specializations, including psychology, anthropology, linguistics, and computational studies (Al-azhaz, 2009, p. 15) meaning it is primarily intellectual with philosophical dimensions and methodologies that have produced contemporary theories and modern methods of mental, scientific, and logical thinking.

First - Definition of Cognition:

One linguist defines cognition as "perception through thought and contemplation ; it is more specific than knowledge. One can say that someone knows God, but not that someone understands God, as knowledge implies a limited understanding reached through contemplation, whereas knowledge opposes denial, and understanding opposes ignorance. (AbdulRauf, 1990, p. 240) Thus, in terminology, cognition is derived from prior observation, provided that this knowledge is attained through the mind and sensory experience.

Cognitive sciences study intelligence in general, human intelligence, its biological basis, its status, and its psychological and linguistic anthropological manifestations (Al-Azhar, 1992, p. 15) It is an approach that teaches humans how to control their lives and their scientific and educational personalities, relying on the brain. This "approach views language as a mental phenomenon and a cognitive function, studying it not as a subject of knowledge in itself, but as a tool for organizing and processing information in the mind." (Rabee, p. 236) It studies language scientifically and from a cognitive and neurological perspective.

As a result, the linguistic system is no longer the explanatory model ; instead, it is the process of organizing information in the mind, with language as the tool. This is in light of "cognitive theorization that has been associated with the making of sciences, having ancient rational origins and philosophical and methodological dimensions (AbdulJabbar, 2010, p. 7); producing a contemporary epistemological theory and modern methods of scientific and logical thinking. Cognitive theorization began studying the relationship between language and scientific breakthroughs, as language represents the best tools for representing and constructing information in the brain, which is the best natural intelligent device " (Al-Azhar, 1992, p. 16).

Given the importance of cognitive theorization, we chose to study the teaching of grammar, especially in the gap left by previous studies. It was necessary to keep up with cognition, which focuses on the brain's foundations of intelligence and concentration to obtain and synthesize information.

Grammar is the fundamental pillar for maintaining the language, preserving its structure, and protecting it from error. It represents the problem faced by students of all levels, leading them to "abandon its study due to the difficulties they encounter.". (Bahauddin, 1978, p. 6) From this standpoint, the cognitive theory has adopted the study of grammar from a different perspective, hoping to present a new image of grammar that students can approach with a satisfied and comfortable mindset.

Second - Grammar According to Predecessors:

According to Chomsky, grammar is an inherent system within humans that allows them to link the meanings in their minds with the set of phonetic signals they use to express these meanings: " It is the ideal speaker-listener's ability to combine sounds and meanings in accordance with the rules of their language (mukhtar, 2014, p. 9) It involves a series of mental processes that handle information. (AbdulJabbar, 2010, p. 9) aiming to identify the factors underlying the infinite (unlimited) expressive possibilities of language; each person produces and understands an infinite number of sentences, even if they have never heard them before. This is due to the internalized method of combining a number of elements stored in memory, which is the linguistic faculty. It is divided into two parts : the mental lexicon and mental grammar, which represents a limited number of synthesis principles that form the computational system. (Al-Azhar, 1992, pp. 50,51)

This Chomskyan perspective, prevalent from the 1970s to the 1980s, focused on generating infinite sentences without considering semantics. This led to a gap due to the simulation of human intelligence by computers and the programming of grammar on computers, which complicated linguistic structures and further distanced the grammatical image from the lesson, making it difficult and more complex due to informatization. Consequently, cognition emerged with its theorization relying on the mind and the involvement of grammar students in constructing sentences and speeches.

Third : The Cognitive Grammar Perspective on Predecessors' Approaches:

Cognitive grammar aims to study sounds, words, linguistic rules, structures, and the linguistic and cultural heritage of different groups of people and how this affects identity formation and cultural communication. Grammar is the foundation of language; if a student ignores it, they ignore their language and break its rules. This concern among language enthusiasts and guardians of the language's integrity prompted cognitive theorists to take on the role of the guiding teacher to rectify predecessors' errors in grammar, leading to their theorization : (AbdulJabbar, 2010, p. 7)

1. Cognitive grammar rejects the notion that separates it from other levels that collectively contribute to meaning construction and formation. This perspective led linguists to separate the levels of word structure, sentence structure, lexicon, and semantics. A word, if stripped of its levels, cannot be parsed or understood within the context.
2. Various grammatical theories did not address the errors made by generative theorists who abandoned their principles, such as in generalized context-free grammar (GPSG) and lexical-functional grammar (LFG), which denied the existence of a deep syntactic level.

3. Cognitive grammar rejects principles that study the meanings of units and linguistic structures unless they are connected to the external world where the speaker and listener reside. This contrasts with views that treat linguistic meanings as a series of conceptual mental processes, not as reflections of the external world.

These criticisms are avoided by cognitive grammar to rise anew, with the contribution of morphology, syntax, semantics, and lexicon, as they can only be regulated by their integration and unity in forming meaning.

Some linguistic theories have fragmented due to "narrow scopes, focusing on limited phenomena and restricted aspects of a limited system, lacking naturalness, causing the theory to collapse into a kind of insularity (AbdulJabbar, 2010, p. 96) losing their place in the linguistic field. On this fragmentation emerged the foundations of cognitive grammar with Langacker.

Fourth - Cognitive Grammar with Langacker :

1. The Early Stages of Cognitive Grammar in Adopting Grammar Studies :

After abandoning old conceptions, Ronald Langacker called for providing explanations for fundamental issues based on the mind and cognitive mental processes. He established his project by defining the cognitive approach and restoring grammar's status. He did not accept the separation between syntax, morphology, semantics, and lexicon (Ibid, p. 96), as grammatical structures "symbolically serve concepts when they symbolize them. Therefore, it is pointless to contrast the dualities that have governed linguistic studies since ancient times; instead, it is essential to consider the continuity between them. (fadwa, 2019, p. 99)" Hence, there is no sense in the independence of syntax and considering it central to the linguistic system while separating it from semantics and lexicon; they form a continuum that necessitates overlap and intersection. He also rejected the description of semantics based on truth conditions.

2. The Nature of the Cognitive Function:

Cognitive theorization devised plans to study grammar by embracing human language as an explanatory and clarifying tool for thought, which is the central element in the mental process occurring on three levels' (mohamed, 2018, p. 173)

a. The Biological Level: This involves the brain as a systemic network composed of millions of interconnected neurons, forming the background of the cognitive construction of the human mind.

b. The Perceptual Level: This focuses on how knowledge existing in the world is represented and crystallized into concepts within the brain, known as mental representations.

c. The Information Processing Level: This views thought as an abstract system for processing information, focusing on how information moves within the neural network as a functional system without referring to what the information represents outside the brain (the mind-computer metaphor). Information processing includes both perceptual (perceiving something) and symbolic (understanding and representing a sentence neurally and mentally planning it). This occurs through a system of categories and concepts that govern the representation, typification, and modeling of the world within individuals' minds. (Ibid, p. 96)

These are the critical levels upon which thought relies to achieve mental processes, especially in education, involving the retention and recording of information.

When a speaker uses a specific grammatical unit or structure, they select a particular form to organize the situation in their mind, where the meaning is structured for communicative purposes (Al-Azhar, 1992, p. 100) Human cognition, as a cross-disciplinary communicative phenomenon, intervenes to achieve an approach aimed at understanding and interpretation. The cognitive structure of human language involves what is known as conceptual blending between tangible things in the world, through metaphors, similes, ellipses, etc. When all this knowledge about existence is cognitively processed by the brain, it blends with the general cognitive and emotional memory. Therefore, linguistic understanding of the world interacts with a vast reservoir of human knowledge that includes human behavior, relationships, and experiences. (Mohamed, 2018, p. 173) Knowledge is acquired when it passes through the brain and is retrieved upon recall, thanks to the linguistic faculty, which is "embedded in the general psychological generator, representing the evolution and stabilization of general cognitive mental structures, especially during acquisition and their use in daily communication. (Al-Azhar, 1992, pp. 98,99)

One of the most distinguishing features of cognitive theorization is its basis on the manifestations of syntax and semantics in organizing words according to grammatical categories and morphological-syntactic structures.

3. Conceptual Grammar :

Cognitive grammar, also known as conceptual grammar, is attributed to the American linguist Ronald Langacker, emerging in the 1970s in response to Chomskyan generative grammar. Langacker argued for a framework distinctly different from generative theorists, who had proven incapable of comprehending it (Tawfik, 2010, p. 13) . Hence, cognitive grammar theory equates meaning with conception, proposing that "lexical units are defined both phonetically and conceptually through the vertical correlation between their phonetic form and meaning, without the need for a syntactic intermediary. (Al-zahr, 2009, p. 70) This approach dispenses with syntactic constraints, especially morphological markers like prepositions ("yes" and "indeed") and exclamations ("ah" and "oh") (Ibid) Langacker rejects syntax, deeming it "unlearnable unless the learner uses the deep structure of sentences," and believes that understanding meaning inherently leads to grasping syntax automatically (Monia, 2013, p. 78)

Cognitive grammar theory is comprehensive, encompassing all language levels—not just grammar but also its formal and inferential structures, whether simple or complex, primary or secondary, generative-transformational, or concerning individual words' phonological, morphological, and semantic structures (Al-Din, 2020, p. 113)

Linguistic production provides numerous alternative descriptions of a scene, resulting in various forms of a single sentence. This multiplicity arises from different angles of depicting the same event, not from one sentence being derived from another. The event is singular, but the conceptual structures offer multiple alternatives . (Al-zahr, 2009, p. 100)

The primary pillars of cognitive grammar include the basic categories Langacker established in his semantic grammar theorization :

3.1. Predicates:

These categories rely on the concept of abstract images or schemata, including a minimal number of characteristics and details. They represent an overall image of various elements within a category, such as nouns or other morphological and grammatical categories (AbdulJabbar, 2010, pp. 75,76, 77)

- Langacker suggests predicates or predicates (le prédicat) for indicating semantic structures based on cognitive domains, referring to any sensory experience or complete knowledge system.

- Temporal reference places the depicted event within a specific timeframe relative to the moment of utterance, while the viewpoint represents the participants' stance in the event. Then, there is sensory perception of colors.

Predicates are divided into two types : nominal predicates and relational predicates, exemplifying mental organization and cognitive structuring of content. For instance, the expressions "writes" and "writing" have the same content but differ in the cognitive processes organizing that shared content. Nominal predicates highlight relationships, emphasizing the entities they connect, while verbal predicates focus on relationships, encompassing entities and objects. The difference between the two lies in the cognitive organization imposed on the predicates, despite their shared content. The nominal predicate highlights relationships, while the verbal predicate emphasizes the space that includes objects and relationships . (Ibid, pp. 75,76,77) The nominal predicate precedes the verbal predicate in order.

Consider the sentences:

(A) Zaid gave a book to Amr.

(B) Zaid gave a book to Amr.

Langacker sees sentences (A) and (B) as different, each representing a different arrangement, one prominent and the other relatively prominent in cognitive organization. The two sentences depict the same event, "the giving," with the same content. Sentence (A) includes a preposition, marking the path to Amr, making it more prominent than sentence (B), which lacks intermediary prepositions. However, it involves another arrangement of the complements (Amr and the book), where ownership is more prominent, symbolized by the absence of prepositional intermediaries between the owner and the owned. Sentence (A) focuses on the path, while sentence (B) focuses on ownership, acquiring the gift. Thus, both sentences share the event's elements but differ in cognitive organization, though their content is similar based on the natural order between the path and ownership. (Al-zahr, 2009, p. 106)

Langacker dedicated multiple chapters to discussing conceptual semantics within the framework of field theory to illustrate the interaction between semantics and grammar in the grammatical categories of nouns and verbs,

describing them as paradigmatic, where the relevant aspect is built especially for the first in its domain) (Tawfik, 2010, p. 94)

3.2. Nouns:

a. Count Nouns: These nouns are linked to spatial dimensions and temporal space, specifying a particular point within a field. In the temporal domain, some predicates like "moment," "duration," or "second" are clearly defined, while others like "hour" or "month" may not be as precise. For instance, "hour" and "month" can be ambiguous compared to "January" or "December." However, they are still considered primary fields for "day" concerning "hour" and "year" for "month," with the lists of Hijri and Gregorian months providing additional specificity. (Ibid, p. 94)

b. Mass Nouns: These nouns, or "mass terms," specify an undefined point within their primary field. For example, "water" does not have a definite spatial extension, and colors like "red," "green," or "blue" do not specify a defined area within the color field. The actual or assumed specification appears to be the primary criterion for distinguishing between types of nouns. (Ibid, p. 94) (Mass terms like "honey" or "water" refer to substances the speaker considers internally homogeneous, meaning no two instances are ever identical, (AbdulJabbar, 2010, pp. 79,80) and they are expandable.

In contrast, the count noun's meaning comprises elements that can be added together, making them countable and enumerable. They can be singular, dual, or plural. The distinction in usage arises from the importance of boundaries, not in relation to quantity but in their material content, placing them in the spatial field as material objects. (AbdulJabbar, 2010, p. 81) Names achieve a level of importance due to their characteristics, including an essential field according to its criteria and standards.

3.3. Cognitive Semantics :

Cognitive theorization combines grammar and semantics, addressing all levels yet focusing on two primary areas : cognitive grammar and cognitive semantics. While centered more on grammar than expected, it does not neglect the semantic aspect in its conceptualization. Langacker considered it "broadly defined, with semantics investigating conceptual structures and analyzing them to provide apparent specifications for their organization." Since conceptual structures are embedded in cognitive processing and its material, semantics' ultimate goal is to identify patterns forming cognitive realities as mental experiences. (Al-zahr, 2009, p. 102)

An example is semantic commonality, one of the richest areas where the effectiveness of the conceptual approach is evident. The degree of commonality corresponds to frequency; higher frequency means more linguistic units share meanings. These units are interconnected by various types of relationships, and this conceptual negotiation's diversity is due to schematic meaning. (Al-Azhar, 1992, p. 102)

Consider the English word "ring," representing a schematic value as a circular unit. Its value manifests in meanings associated with circular symbols, such as a royal ring or anything circular. These realizations stem from expansion, where the schematic meaning [circular unit] expands into multiple meanings. Expansion mediates these realizations as a complete whole but varies in prominence and cognitive benefit. Each realization network embodies the category pattern, branching out other meanings within the network radially. (Al-Azhar, 1992, p. 102)

Lakoff illustrates this, saying, "In light of this, the meaning of a piece of precious metal in circular shape placed on a finger is paradigmatic within the 'ring' network" (Ibid, p. 102). Semantic structures are determined by their relationship with cognitive domains, where a domain is any perceptual experience, concept, or conceptual complex, and any existing knowledge system.

Conclusion :

Cognitive studies aim to uncover the nature of mental structures and their organization by analyzing cognitive strategies recorded in human thought, the patterns of information storage, and the ways language is processed in production and comprehension. To achieve effective grammar teaching, the following key results are highlighted:

- Investigating the nature of mental processes in language and knowledge acquisition and their usage methods.
- One of the characteristics of semantics is its ability to explain the meanings carried by words and phrases that reside in the human mind, derived from experiences that draw their interaction from cognitive and sensory forces.
- Revising the concepts presented in every source of knowledge. As we request more cognitive books, we encounter concepts differing in naming, explanation, and reasoning from one source to another. From this perspective, we

call for the unification of concepts, a review of the abundance of cognitive studies, the extraction of beneficial insights, and their simplification. Additionally, we should establish methods to enable learners to formulate objectives from cognitive and communicative grammar lessons.

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