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THE APPLICATION OF COGNITIVE LINGUISTICS (CL) PRINCIPLES IN THE DIGITAL LANGUAGE CLASSROOM: AN ONLINE ELT TEACHERS' PERSPECTIVES

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Abstract

Cognitive Linguistics (CL) is regarded as an interdisciplinary field of science which focuses on explaining the relationship between language, mind and experiences. A growing body of research has attempted to incorporate cognitive linguistics principles into language teaching context. To date, most pedagogical applications have been largely concentrated on the traditional classroom settings, with relatively very few studies considering the digital environment.

This paper investigates online teachers' familiarity with the concept of cognitive linguistics. Moreover, it explores teachers' perspectives on the employment of activities derived from the application of cognitive linguistics principles in the online language classroom. The quantitative data reveal that although teachers report limited knowledge of CL principles, they display strong awareness of digital pedagogy. Most participants view CL - based activities as adaptable and engaging, supporting deeper conceptual understanding and greater learner involvement. Despite these positive attitudes, several constraints were identified including insufficient training, time constraints, digital resources scarcity and curriculum - related restrictions. However, the majority of respondents expressed a clear interest in further professional development related to CL. This paper offers preliminary insights into how cognitive linguistics may be integrated with digital pedagogy and calls for more extensive empirical research to evaluate and refine CL – informed practices in virtual settings.

Keywords: Cognitive linguistics, ELT, digital pedagogy, cognitive linguistics informed activities

1. Introduction

It is necessary here to first clarify exactly what is meant by *cognitivism* before we discuss cognitive linguistics principles and their relevance to the digital language classroom. Cognitivism is generally defined as a theory of learning that focuses on the human mind, thinking, and mental processes connected to them. (Akhmedova, 2020) Cognitive linguistics has become an interdisciplinary branch of cognitive science closely related to cognitive psychology and linguistics its purpose being the study and analysis of language as a cognitive action. (Najimova & Kartbaeva, 2020) (Gascón & García, 2018) It can be said that cognitive linguistics is a modern approach originating in the late 1970s and the early 1980s in response to traditional, particularly Chomskyan approaches. (Gascón & García, 2018) (Holme, 2009) Studies in this approach have been focusing on the notion that we learn language the same way as we learn other information about the world. (Taylor & Littlemore, 2014) (Rao, 2021) (Ellis, 2006) Two main figures associated with this field, George Lakoff and Ronald Langacker, heavily contributed to the concepts of cognitive linguistics with the intention o

f implementing those concepts in language teaching or transforming the approaches of language teaching. (Taylor & Littlemore, 2014) (Robinson & Ellis, 2008) In this study, I attempt to make a connection between cognitive linguistics principles and the digital ELT. Due to practical constraints and the limited literature on digital pedagogy, the discussion presents a focused, exploratory overview rather than a comprehension review. The reader should also bear in mind that the opinions in this paper are based on theoretical insights, teachers' survey findings as well as my online teaching experience.

Throughout this paper, the term CL will refer to cognitive linguistics, DP will refer to digital pedagogy, ELT to English language teaching, and ACL to applied cognitive linguistics.

2. Literature review

2.1. Revisiting cognitive linguistics principles

As was pointed out in the introduction to this paper, George Lakoff and Ronald Langacker initiated the opposition to the Generative Grammar and Formal Semantics through their field of cognitive linguistics. (Evans, 2012). Being part of cognitive psychology, cognitive linguistics also examines the functional approach to language. (Zhao, 2016) It is imperative to emphasise that cognitive linguistics is a multidimensional field; to clarify, its focus is not solely on one theory, yet, it includes a

variety of theories. (Gascón & García, 2018) These theories are referred to as commitments and thesis, which concentrate on the connection between human language, the mind, and the sociophysical experience. (Evans, 2012) (Nga, 2023)

2.2. Cognitive Linguistics Commitments

Central to Cognitive linguistics are two main commitments: the Cognitive Commitment and the Generalisation Commitment. (Rao, 2021)

- The Cognitive Commitment

According to cognitive commitment, the principles of linguistic structure need to be in accordance with the knowledge of human cognition derived from other cognitive sciences such as psychology, artificial intelligence, cognitive neuroscience, and philosophy. (Evans, 2012)

- The Generalisation Commitment

The Generalisation Commitment rejects the idea that various aspects of linguistic knowledge come from separate modules of the mind; instead, various aspects of linguistic knowledge derive from a common set of human cognitive abilities. (Evans, 2012)

Consequently, these two commitments gave rise to five central hypotheses:

- The thesis of embodied cognition
- The thesis of encyclopaedic semantics
- The symbolic thesis
- The thesis that meaning is conceptualization
- The usage - based thesis (Evans, 2012) (Taylor & Littlemore, 2014) (Croft & Cruse, 2004)

a. The Thesis of Embodied Cognition

As explained by Evans (2012), one aspect of this thesis suggests that reality is not objectively presented, yet it is shaped by our individual embodiment - the synthesis of embodied experience. To be more specific, recalling or contemplating concepts happens when our brain reactivates neural patterns that are recorded as part of our embodied experience. These reactivations are called simulations. Simulations are deeply rooted in the brain states, resulting from our interaction and action with the sociophysical environment.

b. The Thesis of Encyclopaedic Semantics

Similar to the previous concept of embodied cognition, this thesis, as elaborated by Evans (2012) also consists of two aspects. The first aspect focuses on the relationship between the semantic representations, known as semantic structure, and the conceptual representations. The second aspect looks at views that language concepts are part of a structured knowledge, referred to as semantic potential and likened to an encyclopaedia.

c. The Symbolic Thesis

The following thesis posits that the fundamental unit of grammar is a form - meaning pairing or a symbolic unit. (Langacker, 2008 as cited in Dolgova, 2016, p.1) In addition, the symbolic thesis maintains that mental grammar consists of a form, a semantic unit and a symbolic connection between the first two. Stated differently, our mental grammar contains units of pairings of form and meaning.

d. Meaning is Conceptualization Thesis

As asserted by cognitive linguists, meaning conveyed through language includes the process of conceptualisation. To further explain, one understands language via the process of conceptualisation, which covers linguistic and nonlinguistic cognitive activities. (Pavlović, 2010) This thesis holds that during the process of language understanding, symbolic units are combined resulting in nonlinguistic units of meaning. Two approaches to meaning constructions have been developed by the cognitive linguistics: the first looks at the types of nonlinguistic mechanisms called ‘backstage cognition’. Backstage cognition is then clarified through two theories: Mental Space Theory, which explains the creation of mental spaces, and Conceptual Blending Theory, which deals with their integration to produce new meanings. (Evans, 2012)

e. The Usage - Based Thesis

The core concept of this thesis is that the mental grammar of a language user is shaped through abstraction of symbolic units from language use in real life situations. A significant outcome of accepting this thesis is that there is no straightforward difference between knowledge of language and

use of language for knowledge derives from usage. Therefore, knowledge of language is knowledge of how language is used. (Evans, 2012)

3. ELT in the Digital ERA

Recent world happenings, such as the Covid - 19 pandemic outbreak and the continuing advancements in AI, have had a profound influence on language teaching and language learning. Consequently, the communicative aspect of language suffered a major impact by the practice of 'social distancing' (Li & Lan, 2021). Li and Lan (2021) point out that such practice brought about cognitive disturbances and difficulties in language learning for both children and adults. However, these challenges have been successfully being dealt with the help of digital technologies. Additionally to this, these rapid technological developments have resulted in Digital Language Learning (DLL) as a standard educational practice in all sectors. (Li & Lan, 2021) The emphasis on the use of technology for language learning and teaching has shifted across different periods. As explained by Warschauer (2004), the behaviourist movement was predominant between 1970s and the 1980s and during this period the 'computer learner' was perceived as part of the stimulus - response relationship resulting in the drill - and - practice being the main method. It was then in the 1980s and the 1990s when the cognitive approach rejected the behaviourist views that the focus turned to communication and fluency. At the same time, CALL (computer – assisted language learning) started to expand. Later on, in the 2000s, a greater emphasis was placed on the authentic context of learning and social interaction as well as the socialcognitive scopes on learning. This authentic context encompassed social media and multimedia technologies and language was no longer considered isolated from the environment yet embedded in the context. (Li & Lan, 2021)

3.1. The rise of digital pedagogy

The Covid - 19 pandemic, as mentioned earlier, reset world education and posed challenges that caused a shift in educationalists' perspectives. 'Digital pedagogy' is one intriguing example, 'outcome' or blended concept containing two notions, 'digital' and 'pedagogy'. Digital pedagogy refers to online, blended, and physical environments and combines views and methods that include the application of digital technologies. (Giannikas, 2020) As such, it centres around the pedagogical impact these technologies have on language learning and cognitive development. Similarly, Mishra describes 'digital pedagogy' as a field that unites technical and theoretical information, as well as education and pedagogical criticism. (Mishra & Mishra, 2019) Additionally to this, multiple studies refer to this pedagogy as innovative digital pedagogy.

3.2. Where Cognitive Linguistics meets ELT: Implications in online ELT

CL is built upon cognitive, social, and communicative theories i.e. it lays emphasis on how humans convey their experiences from their interactions with the physical world into language. (Evans & Green, 2006) This process suggests that perceptions are shaped before linguistic meaning and form are created in the human mind. (Evans & Green, 2006) Studies in CL maintain that language mirrors how people construct social events in their experiences. From the aforementioned, we can deduce that CL has certain implications for the ELT field. As implied by Zavalniuk, Bohatko, Pavlyuk, Kholod, and Horobets (2021) these implications gave rise to a distinct field of applied cognitive linguistics (ACL). Furthermore, the attention of the new field is directed towards the convergence of ACL and foreign language teaching. Given this, the practical applications of CL may improve language teaching as well as offer solutions to issues in language learning. (Bui, 2019) In order to support this, it is necessary to activate the theoretical and empirical research of CL and build it into pedagogical practices. Despite the growing research in CL and ELT, little data has been found associating CL and online ELT. Therefore, I intend to base this paper on the employment of a selection of CL related activities and share my insights into their utilisations in the online ELT along with the perspectives of a number of online EL teachers.

Holme (2009) draws our attention to specific activities that language teachers can employ in the language classrooms:

Language teaching and embodiment (Holme, 2009)

Embodied learning points out to strategies that employ movements and body to achieve effective language learning. (Jusslin, S., et al, 2022) Moreover, it looks at the creation of activities that

encompass the exploratory process. That is, linguistic meaning and symbols will be more memorable to learners if they are accompanied by movements, gestures, and imagery from which they derived.

a. language as rhythm and movement (Holme, 2009)

Dalcroze's views on music, as given in Holme (2009), suggest that music should be experienced not only through the movement of the body, but also through mime and dance, called eurytmics. Holme (2009) provides an example of language activity reflecting this view:

Activity: Feeling the stress

The teacher introduces a new vocabulary item by inserting it into an iambic line. For example: 'cupboard': The˘re i¯s a˘ cu¯pbo˘ ard in¯ my˘ ho¯use. The teacher walks and says the line at the same time. They try to say it by taking a small quiet step when the syllable is unstressed, then stamping when is stressed. The teacher then asks a student to repeat exactly as they do. They ask the class to tap out the stress with their hands on the table. This activity can be used across all age groups, as stated by Holme. (2009) and also incorporated into the online context.

b. Language and mime, enactment, and movement (Holme, 2009)

Activities that include movement, stress and rhythm, also connect language with the body's ability to express meaning through symbols. According to researchers, 'vocabulary learning can be helped by the physical enactment of vocabulary'. (Craik and Lockhart 1972; Duffelmeyer 1980; Boers and Lindstromberg 2005, in Holme 2009). Drama and storytelling as teaching methods have been practiced by the ELT teachers for a long time. Thus, they can utilise the same activities, for instance, telling a story and instructing students to mime it. My personal online experience witnesses the use of mime in the online classroom for storytelling activities, grammar and vocabulary teaching.

Activity: Moving through language

The teacher gives the class a short story that can be easily divided into the sequence of Abstract, Orientation, Complicating Action, Evaluation, Resolution, Coda (Labov and Waletsky 1967, in Holme, 2009). The teacher asks the class to divide the text into appropriate discoursal moves, for example: I had rather a strange journey home yesterday (abstract); And, as you know, I only live a few streets away from school (orientation); When waiting at the lights, I saw a man lift a wallet from a lady's shopping bag (complicating action); He didn't look threatening (evaluation); So I decided to follow him without saying anything (complicating action); Then something totally unexpected happened (evaluation); Suddenly he seemed to notice me, turned and held out the wallet and said, 'here' giving me the wallet before running into the crowd (complicating action) I handed the wallet into a police station but of course there was no money in it (resolution);And I'm still amazed at the nerve of the man (coda). (Holme, 2009)

This activity can be realised in online breakout rooms where the teacher will assign the roles and then have a group check. The teacher checks that each group produces an acceptable analysis. A pair of students leaves the 'class'. The teacher calls them the narrators, takes their texts from them and gives them the moves only. Then, the teacher asks them to recall the text and write it down, filling in each move. The teacher assigns one or more moves to each group at random until each move has been given out. In groups (in breakout rooms), the students rehearse their move as a mime. The narrator comes back into 'class'. Each group performs their mime out of order. The narrator assigns each group a number according to where the group's mime occurs in the story sequence. They can ask a group to repeat their scene as often as needed. The narrator moves among the class pointing to each group to ask them to mime their part of the story. The narrator then says what has been shown and the class corrects.

c. Rethinking TPR

TPR is an approach that began in the 80s whose main objective is to prompt students to physically respond to language without any output. Considering that TPR as a language approach recognises the CL principle of embodiment, we have the have the following activities (Holme, 2009):

Activity: What am I doing?

The teacher asks the class to think of some simple (and sensible) action that they want another student to perform, such as cleaning the board or opening a window. The teacher asks one student to instruct another how to perform it without saying what it is, whilst the other carries it out movement by movement and never doing more than instructed. (Holme, 2009)

Activity: What am I?

The teacher gives students a card telling them they are some functional artefact (e.g. a washing machine). The teacher tells them to think how they would imitate and express the object's function,

taking it through its functional cycle (e.g. wash, rinse, dry), then how they would ask another student to mime that cycle. In pairs and by turn, student A tells student B how to mime the cycle without saying what the cycle is. The class guess what the mime is about by saying what is happening at any given moment. (Holme, 2009)

Use of Gestures in Language Teaching

Gestures are an inseparable part of human communication. Therefore, in recent years, there has been considerable interest in the use of gestures in language, particularly by cognitive linguistics. According to CL views, gestures are crucial as they provide clues to the conceptualisation during language use. For instance, gestures are often used when teaching tenses. As given in Holme (2009), pointing to the behind of the student denotes the past, whereas pointing to the front refers to the future. Similarly, present perfect can be illustrated through down - beat of the hands. As such, these types of activities can also be 'performed' in the online classroom. Below is the example of Lindner, (cited in Holme, 2009, p. 59)

• 'up' as an expression of movement or a path: raising the hand above the head;

• 'up' as a static location: hand held above the head;

• 'down' as an expression of movement or a path: index finger moving down below the waist in the direction of the ground;

• 'down', as a static location: hand below the waist, palm flat towards the ground.

• 'across' (hand flat and palm down sweeps over the floor);

• 'over' (hand extends and arm arches up and over);

• 'through' (hand pushes effortfully forward).

• 'across' (flat, rapid and dismissive);

• 'over' (rising intonation on the first syllable, fall on the second, extension of the first syllable o___ver);

• 'through' (effortful, as if pushing against an obstacle). (Holme, 2009)

Gesture and English articles

Teaching English articles can be challenging for teachers, especially if the learners' native language does not constitute the concept of definiteness and indefiniteness. Here is an activity that could simplify the delivery of this grammar topic:

Activity: Determined gesture

The teacher shows the class similar but distinguishable sets of objects such as books on a shelf or pictures on a wall. The teacher asks students to select objects by pointing to them and using the definite article ('I want the red book on the right'). After a few objects have been distributed, the teacher asks other students to ask each other for them using phrases of possession ('I want the red book that Jane has'). (Holme, 2009)

Language, culture and conceptualisation in the classroom

Two CL tenets embody the following: first, that meaning is conceptualised and as such needs to be shared among individuals so as to support communication; second, that language, culture, and meaning are interconnected.

Activity: What we do with it

In groups, students select an international trend or product associated with a target language culture. For example a Hollywood film or international restaurant chain. Out of class, the groups research local responses to the product, assessing how the same entity may be differently perceived. (Holme, 2009)

Activity: Cross-cultural meanings

The teacher compiles a list of abstract words that represent key socio-cultural concepts, for example: friendship, family, love, home... In groups, the teacher asks the students to come up with statements for each word on the list as follows: In the USA friendship is … In my country, friendship is….The groups should discuss why they have said what they have, and provide supporting anecdotes where possible. The teacher asks each group to make a presentation on the meaning of one of the concepts in one country then in a target-language country. (Holme, 2009)

Construal and Language Teaching

Another major focus of Cognitive Linguistics is the construal i.e. the different ways of conceptualising a scene. (Langacker, 1987 cited in Holme, 2009) For cognitive linguists, there isn't a

true synonymy since a different choice of words will achieve a different construal. Hence, language is conceptual instead of perceptual.

Activity: The room

The teacher asks students to close their eyes and listen to the following text: She went into a room. There was some old furniture and a fire burning. A cat lay purring on the carpet. The teacher asks the class to listen again and note down all the nouns, starting with the most comprehensive category in the description, for example, 'the room' . . . Working in pairs, students should describe what the first noun names and take notes. Thus for 'room' the students say how the room looked, what was in it, and where it was situated. They should detail the furniture, whilst asking the teacher to supply unknown vocabulary. (Holme, 2009)

Activity: My what?

The teacher teaches a question and answer routine as follows: the teacher says 'my table has.. .' using countable nouns, the student responds 'your table has what?' the teacher responds: 'my table has one leg' the teacher practises with other nouns. After a few minutes practice, the teacher responds by asking: 'the book has four pages that..? ' to elicit 'that what?' to get for example, 'that are difficult to understand'. The teacher stops here, or asks someone to repeat the entire sentence so far and extend with another relative pronoun in the same way as before: 'My book has four pages that are difficult to understand but which . . .' (Holme, 2009)

Metaphor and language teaching

Block (cited in Holme, 2009, p. 135) observes the way teachers and students use different metaphors in order to construe the language learning task.

Activity: Keeping it together

When introducing new abstract lexis or an idiomatic phrase, the teacher identifies a conceptual metaphor in which the forms could be said to originate. After identifying an appropriate metaphor, the teacher places it in the middle of the board and brainstorm for forms that derive from it. As they produce new forms they write them on the board around the conceptual metaphor, thus producing a type of mind map. Either in speech, writing, or both, students try to come up with sentences that use the brainstormed forms. (Holme, 2009) This activity can be adapted to the online context the difference being in using specific platforms for brainstorming.

Teaching Encyclopaedic Meaning

Teaching vocabulary involves more than solely finding native language equivalents and matching the meaning to the L2. In order to build encyclopaedic meanings, students first have to uncover the different meanings words express in various contexts and then create more extensive categories.

Activity: What it really is

The teacher divides the class into two or three teams. The teacher tells them that they are going to build knowledge about a particular item but that if they call out what they think the item is, they will be disqualified. The teacher divides the working sheet into columns marked by: 'how we use it', 'how I use it', 'what it must have', 'what mine has'. The teacher thinks of the specific example of a category that is known or unknown to the class. For example, their house, a favourite chair, or book. The teacher asks the class to suggest sentences that describe what they think the object is. The sentences must fit one of the headings written on the board. When the class has produced enough knowledge about the item to build a complete category description, the teacher asks them to describe it orally, in writing, or both, using the notes on the board. (Holme, 2009).

Teaching Constructions

According to Goldberg's definition (as cited in Holme, 2009, p.178), a construction is a meaning that 'combines others to create one that cannot be predicted from the combined parts'. He further illustrates the definition with the prepositional phrase, consisting of a preposition 'to', the definite article 'the', and the noun 'house' as in 'to the house'. Constructions can be fully filled, where all the words are specified (e.g. idioms) or partially filled, where only some elements are fixed, such as bound morphemes or inflections. For example, idioms can be taught through activities where students explore and present the roots of idioms as project work. (Holme, 2009).

Activity: Pride and prejudice

The teacher brainstorms for the 'cognitive' verbs: 'think, realise, wanted, hoped (for), know, expect, imagine'. The teacher brainstorms for adjectives that describe somebody's character. The teacher asks students to remember somebody who they got wrong and to say why they did or did not like this person. The teacher asks them to make constructions using examples as a model (He is wiser than I thought). The teacher repeats the exercise with things they bought and subsequently found disappointing and/or places they visited or events they attended that were a let-down. The teacher provides the verbs, 'mean, intend, plan, and expect' then repeat with an idea that 'turned out better than planned'. (Holme, 2009)

4. Research

Due to practical constraints, this paper cannot provide a comprehensive review of teachers' perspectives regarding the application of the aforementioned teaching activities. Hence, a short anonymous survey was conducted as a preliminary quantitative study to explore online teachers' preview on their understanding of CL as well as their knowledge of CL principles applications in the online classroom. The survey included ten online English language teachers with whom I work in the same institution and who teach English as a second language across the world. These ten teachers teach students at all ages and levels, yet, due to mentioned limitations, the survey did not cover a specific age and/or level, yet, it only required the participants to be solely teachers of English who teach in an online setting. The survey was undertaken to examine general perceptions of the CL principles and their employment in the digital language classroom. Therefore, it offered fifteen single and multiple choice questions based on the prior theoretical review.

5. Results and discussion

The results show that teachers possess limited theoretical understanding of cognitive linguistics. The majority of teachers reported only basic familiarity with the approach, whereas fewer exhibited moderate understanding and one indicated minimal or no knowledge. Knowledge of specific cognitive linguistics principles was limited; however, some participants identified core concepts such as The Cognitive Commitment, The Thesis of Embodied Cognition, The Thesis of Encyclopaedic Semantics, Meaning is Conceptualisation Thesis, and The Usage Based Thesis. Even though the participants demonstrated limited theoretical background, most of them recognised the application of CL principles in language teaching. By contrast, teachers displayed strong familiarity with the concept of digital pedagogy with almost all acknowledging experience with the technology – supported teaching practices. These findings indicate readiness to incorporate innovative methodologies in the online environments.

Overall, teachers expressed positive attitudes toward the suggested CL-based activities, with the majority indicating likelihood of employing them in the online classroom. The activities were regarded as engaging, flexible fostering deeper understanding and active participation. Participants highlighted the pedagogical significance of the tasks considering them innovative and adaptable to different ages and proficiency levels. However, several practical and structural obstacles were identified, including insufficient training, time limitations, scarcity of digital resources and curricular constraints. A few teachers questioned the suitability of some of the activities for absolute beginners.

In general, the findings point to a gap between teachers' theoretical knowledge of CL and their willingness to engage with cognitively informed practices.

Despite practical challenges, teachers' readiness and generally positive attitudes show promising potential for integrating CL principles in the digital ELT context.

6. Conclusion

The main goal of the current study was to establish a connection between CL principles in the online language classroom. Furthermore, the aim was to explore teachers' perspectives on CL principles in the online language classroom. Despite its limited research scope, the essay could still offer preliminary findings for further research. One of the more significant findings to emerge from this study is that CL principles could be favourably applied in the online language classroom. As mentioned in the literature review, CL is a promising approach in language methodology. (Nga, 2023) To my knowledge, this is the first time that CL has been explored in the digital context and the conclusion is drawn from the literature review, the short survey and personal beliefs. Hence, this paper and its findings

can be considered preliminary. My experience suggests that if teachers receive adequate training then the digital context will be richer with a new approach, in this case applied CG, more specifically, applied digital CG. A greater focus on cognitive linguistics, language acquisition, language and image processing, and language education research is therefore needed to suggest an integration of the results of cognitive aspects into a model which will be called 'cognitive language pedagogy'. (Roche as cited in Taylor and Littlemore, 2014, p. 344)Whether this model can be accepted in the dynamic digital pedagogy, remains to be determined by future research.

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