



## THE CONNECTION BETWEEN LEARNING LANGUAGE AND COGNITION

Isroilova Dilrabo<sup>1</sup>

<sup>1</sup> Master student of SamSIFL

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### ABSTRACT

*While teaching process, teachers need to know the pupil's ability to catch and to digest the information. In this process, the term "cognitive capability" plays a great role. It was once believed that infants lacked the ability to think or form complex ideas and remained without cognition until they learned language. It is now known that babies are aware of their surroundings and interested in exploration from the time they are born. From birth, babies begin to actively learn. They gather, sort, and process information from around them, using the data to develop perception and thinking skills.*

The connection between cognition and language is of paramount importance to language learning and teaching. Exploring this link may lead to an understanding of the part played by cognition in the English as a foreign language classroom. This is feasible by shedding light on the way multiple cognitive devices operate in language learning activities. This introductory chapter firstly gives a succinct account for the shift from behavioral to cognitive theories of learning. Secondly, it provides a brief overview of relevant research in the area of cognition and language learning.

Research into the relationship between cognition and language is useful in understanding the functioning of the cognitive mechanisms underlying any language learning activities, particularly in educational settings. In the late 1950s, there seemed to be two different views

concerning this relationship. The former relates to

Chomsky's ideas emerging out of his mentalist theory of generative linguistics. One of the main tenets of his theory is the existence of a mental innate capacity within all children that permits them to acquire the grammar of a language. This innate capacity which he called Language Acquisition Device (LAD), or Universal Grammar (UG), is believed to be located in the brain. The second view characterising this relationship belongs to scholars in the fields of cognitive science and cognitive linguistics who stood out from Chomskyan language acquisition philosophy. In cognitive-linguistic areas of research which contribute to language learning and teaching, the idea of an existing LAD or UG in the human brain is refuted, and the link between language and cognition places a special emphasis on such aspects as



comparison, categorisation, pattern finding, and blending that are believed to “operate across all areas of language and are the same as those involved in other areas cognition”<sup>1</sup>. The present book looks at this relationship from a purely educational perspective, and aims to explore the interplay between cognition and language learning by looking at the role that cognition has with respect to skills development, language processing, bilinguals’ perception of phonemes in a second language, vocabulary memorisation, metaphor identification, vocabulary attrition, motivation, and so on.

The audience for the Cognition and Language Learning volume includes students, teachers, educational practitioners, and researchers interested in research into the interaction between cognition and language learning.

It is also destined for anyone working in the areas of language studies, language learning and teaching, cognitive linguistics, and applied linguistics. This book is also aimed at university undergraduate students and graduate students conducting research to obtain master’s and doctoral degrees in English language learning and teaching, cognitive linguistics, and applied linguistics. Cognition and Language Learning represents a reference book for scholars investigating this specific area of language teaching and learning and is believed to be sufficiently pertinent to meet the needs of researchers in this field of investigation. This introductory chapter begins with an account of the shift in orientation from behavioural to cognitive theory that the

sphere of language learning and teaching has witnessed. It then moves on to a review of research in the area of cognition and language learning.

Finally, it provides the aim of the present volume and describes its constitutive chapters.

From behavioural to cognitive language learning approaches

For almost two decades, the behaviourist paradigm had dominated American psychology focusing mainly on observable behaviour, rejecting the contribution of mental processes to learning. Language acquisition was uniquely based on the principle of reinforcement wherein children’s correct utterances were rewarded, leading them to form habits. This had an undeniable influence on language learning/teaching approaches, such as the audio-lingual method. Afterwards, the cognitive revolution redirected attention to human thought processes, thinking abilities and reasoning. It has now become impossible to deny the central role of cognition in language learning. The term “cognition” refers to “the process by which knowledge and understanding is developed in the mind”. It also means “the use of conscious mental processes”. The adjectival form “cognitive” means “connected with thinking or conscious mental processes”.

Cognitive psychologist, Matlin defined “cognition” as a mental activity with various cognitive processes. In her view, cognition concerns the acquisition, storage, transformation, and use of knowledge, and includes a wide range of mental processes,

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<sup>1</sup> Littlemore 2009: 2



namely, perception, memory, imagery, language, problem-solving, reasoning, and decision-making. She further described the cognitive approach as a theoretical stance that focuses mostly on people's knowledge and their mental processes.

Cognitivism is a linguistic current that appeared in the late 1950s and supplanted the behaviourist approach to learning. By then, learning theory had made a shift away from the use of behavioural procedures in education to an approach that drew on cognitive science. Educational practitioners moved away from classroom practices that considered only observable learners' behaviour and espoused methods that focused primarily on mental processes including thinking, problem-solving, language, concept formation and information processing. Thus, cognitive theory has gained too much prestige among existing learning theories.

Cognitive linguistics, language pedagogy, and the English present tense, Langacker sketched the pedagogical implications of cognitive linguistic theory. A further outstanding figure, Kövecses, argued that "the theory of cognitive linguistics and the many descriptions of various aspects of language that it has provided so far are potentially useful in foreign language teaching (FLT)". This is to say, cognitive linguistics has contributed significantly to language learning and teaching. Indeed, its major principles have most importantly been adopted in educational settings<sup>2</sup>

<sup>2</sup> (Verspoor 2017; Holme 2012, 2009; Lantolf 2011; Achard & Niemeier 2004, Atkinson 2002; Pütz et al. 2001; Langacker 2001; Kövecses 2001; Herrera & White 2000; Kövecses & Szabó 1996).

Research directions into cognition and language learning.

The connection between cognition and language learning has intrigued many scholars within the research areas of cognitive linguistics and language teaching and learning<sup>3</sup>. It is an issue that is increasingly significant and popular among scholars in all spheres of education and applied linguistics. Skehan, in his publication *A Cognitive Approach to Language Learning*, demonstrated the role of task-based instruction in second language learning. He drew on psycholinguistic and cognitive features characterising the process of language learning, focusing on the mechanisms underlying language processing. Skehan particularly put stress on the significance of individuals' cognitive disparities. Herrera and White investigated the contribution of cognitive linguistics to language learning in the economics classroom. They investigated the issue of whether the conceptual metaphor was related to the process of storing and retrieving information. Langacker, with respect to cognitive grammar, considered linguistic structures as conceptual instruments whose meanings depended on the cognitive process of interpreting the situations wherein they occurred. Kövecses suggested some pedagogical implications of cognitive linguistics with regard to the learning of idioms in the English as a foreign language classroom.

Acquisition. It is a collection of chapters concerned with second language

<sup>3</sup> Pütz & Sicola 2010; Segalowitz 2010; Littlemore 2009; Robinson & Ellis 2008; Langacker 2001; Kövecses 2001; Herrera & White 2000; Skehan 1998



acquisition and also with “how language draws on other, more basic cognitive systems and abilities, such as perception, attention allocation, memory.

Applying Cognitive Linguistics to Second Language Learning and Teaching regarded cognitive linguistics as a dominant branch within linguistics, mainly in relation to the domain of second language teaching.

Segalowitz dealt with fluency within the scope of cognitive science and debated the advantage of a cognitive science approach in exploring fluency. Segalowitz made the claim that “only by taking a

cognitive science approach, capitalising on the variety and richness of its many component disciplines, can one hope to capture in a coherent perspective all the relevant factors that jointly determine fluency at any given moment”. Pütz & Sicola edited a volume that dealt with the connection between cognition and second language acquisition. Its objective was to shed light, through research, on the issue of learners’ involvement in second language acquisition contexts.

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