Roles of Cognitive Linguistics to Second Language Acquisition

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ABSTRACT

Second language acquisition plays a significant role in language learning and instruction as the theories and hypotheses in this branch of linguistics provide mentors and learners with an outlook for applying the most appropriate methods for studying. Nonetheless, a distinct perspective supports different methods together with approaches that could complicate the situation. By reviewing the theories of second language acquisition and cognitive linguistics, the writers prove two main roles of cognitive linguistics to the process of acquiring a second language. Thanks to cognitive linguistics, the universal features of absorbing objects in the real world, including languages, could be figured out in another move elsewhere. That is the trigger role of cognitive linguistics for second language learning. Furthermore, explaining theories in mental processes, language instruction, and learning could be highlighted on appropriate methods and approaches for both lecturers and students. However, the researchers raise the concern of role change due to the shift from a conventional classroom to a virtual learning environment. After all, suggestions for bettering pedagogy quality are discussed by the application of cognitive linguistics to second language acquisition for opting for suitable methods and approaches for both instructors and learners.

Keywords: cognitive, SLA, studying, acquisition, second language

Introduction

Language is the most powerful communication tool for people as we live in a world of languages. With various written and spoken languages across the world, people can express ideas and exchange thoughts with feelings (Lantolf et al., 2014). The fact that language enables the development of not only the economy but also science cannot be denied due to communication activities (Meyerhoff, 2006). Via the preceding mentioned activities relating to language materials, science, technology, and economy are viewed as factors of society shaped under the shade of languages. Conversely, languages are formed gradually by the development of the scientific fields and human acts. Over time, the demand for further development in all fields has increased the need for learning languages. In the era of internet and technologies, languages play a significant role in civilization (Marginson & Dang, 2017). Accordingly, language learning demand leads to in-depth research for understanding the nature of linguistics for teaching and learning methods. Therefore, theories and perspectives of language acquisition

have been researched, argued and discussed plentifully.

Cognitive linguistics has been considered a new perspective for researching languages so that the features, as well as the natural characteristics of communication means, could be shed light on. In fact, these things are viewed under the mental process of humans consisting of the processes of perception, memorization, thinking, and applying (Moore, 2011; Evans, 2012). With the perception of surrounding objects via human senses, the theories and conceptualization are formed gradually. These movements could be viewed clearly in the light of experientialism and theories of cognitive linguistics. With the experiences of the world of objects and senses, people form the conceptualization and ideas of the information and then apply it in real life. Researchers and scholars have taken advantage of this linguistics branch to develop appropriate theories of language acquisition. The purposes of this are for better studying languages so as to meet the previously mentioned demands.

This paper tries to provide some spotlight on the roles of cognitive linguistics in the acquisition process of languages. By reviewing the theories and hypotheses of language acquisition together with the mental processes of language via the outlook of cognitive linguistics, the writers highlight the trigger roles of cognitive linguistics for absorbing languages. Moreover, the function as the compass for direction in language teaching and learning will be discussed due to the fact that this field of linguistics links to the neuro system of humans, which is both interesting and mysterious for researchers. The authors subsequently make some comments on the cognitive linguistics roles in the acquisition process and discuss the application in pedagogical activities. The conclusion would summarize everything, critique the paper, and suggest further research.

Second language acquisition and Cognitive linguistics reviews

Scholars and researchers have been attracted by the heated topic of so-called second language acquisition for a long time (Lantolf et al., 2014). Theories and hypotheses have been explored and studied for bettering the quality of learning as well as teaching languages all over the world. The problem is that theories and perspectives toward pedagogy vary over time, which leads to the fact that the teaching and learning methods have also changed (Inoue & Bell, 2011). Accordingly, the need for mutual mechanisms from distinct theories and hypotheses is raised. Meeting the mentioned demand, cognitive linguistics has appeared as the most appropriate branch of language field science. This happens due to the fact that the framework of this linguistics branch is based on the mental processes of humans, which are related to the senses of people (Evans, 2012). Additionally, with a similar physical structure as well as the function of body parts of sense and the mechanism of organizations, the university of things acquisition, including languages, is adapted. Therefore, the correlation between cognitive linguistics and second language acquisition is made clear from thin air as the neuro-linguistics relatives function as the core key of teaching together with learning languages. It plays as a trigger for learners and mentors to understand and implicitly gets to know the language. In another move elsewhere, cognitive linguistics provides researchers and scholars direction for the big picture behind the perspective for language instruction methods

Acquisition of a second language

Second language acquisition can be understood as the process by which learners quietly take the language material through daily activities such as speaking, reading, watching, etc. (White, 1987). It, as well, is the main topic of the work from VanPattern and William (2014) in which they edited a series of papers from different researchers on the theories and hypotheses. The purposes of the editors are the theories, and hypothesis summaries and guidance for teachers and learners regarding the nature of language absorption. From the mentioned issues, the

instructors regulate the methods together with approaches to teaching; besides, learners understand the process of studying more clearly. All these things contribute to more successful language pedagogy (VanPattern & Williams, 2014). In addition, the cognitive linguistics review comes to light via the sequent portion. This part will shed light on the general view of theories and hypotheses on second language acquisition. The roles of cognitive linguistics to second language acquisition are presented by analyzing previous proportions.

According to distinct authors, researchers, and scholars, language acquisition could be shown to have different forms and definitions. They have conducted numerous studies to shed light on the nature of taking information from the surrounding environment of learners to better the quality of pedagogical activities. There have been many theories together with hypotheses developed and studied over time for the application of teaching and learning languages better, especially in learning foreign languages. This happens due to the fact that language is one of the variables of any nation (Chambers, 2007; Tran, 2013). There are differences between the cultures and language aspects of learners and target language; therefore, researchers of a method of teaching and learning have the desire to remedy the most suitable ones for application. In general, language acquisition is the ability of perceiving and comprehending the language and then applying it. These processes could occur thanks to the mental process and the activity of cognitive acts (Halliday & Matthiessen, 2013). In short, some theories and hypotheses of language acquisition will be reviewed for further analyzing the correlation with cognitive linguistics.

The earliest and most fundamental theory in second language acquisition could be listed as the theory from Putnam with the view of Noam Chomsky (1966 as cited in Putnam, 2013). In this hypothesis, Chomsky advocated that language ability is the heritage that children take from their parents. The author argued that the learners absorb languages from their parents and other speakers. This hypothesis also stated that possible language errors come from the speakers around learners. Through daily communication activities, the learners implicitly absorb the knowledge and skills of language. This hypothesis could be viewed as the early research in language acquisition that was related to the Universal Grammar theory of Noam Chomsky. In this theory, Chomsky proved the device in our brain accounting for the language capability which is called a black box or language acquisition device (LAD) (VanPattern & William, 2014). This proportion of a person is responsible for acquiring the language and generating the utterances. Due to the fact that people even people have a similar structure of the brain. Accordingly, the LAD of different individuals are similar and the statement of black box similarity impulses in the universal grammar that people carry out in daily life will be discussed in how it relates to cognitive linguistics later.

Other remarkable theories could be listed as Behaviorism by Skinner, Krashen's five hypotheses and the sociocultural theory of Vygotsky. In detail, the theory of behaviorism (Moore, 2011; Lantolf et al., 2014) focuses on the process of imitating and reinforcement of learners toward what they contact. In fact, this theory's processes are perceiving, copying, and applying. Regarding linguistics, the learners contact the sources of the target language and learn the language without effort from the view of behaviorists. The most important thing of this psychological theory is that the process of learning language implicitly will occur when there is positive or passive interaction between learners and other objects of language. Regarding the interaction between learners and target language materials, the hypothesis so-called Comprehensible Input from Krashen (White, 1987) concentrates on the suitable input of the target language for learners, which is considered the materials and sources of input is a little higher than the competence of learners. This, in fact, encourages learners to engage more in the language, and hence, the target language capability is raised effortlessly. This hypothesis shares

a similar feature with the previous theory of Skinner that there is an interaction between learners and sources of languages. However, these theories and hypotheses provide the spotlight on the process of absorbing target languages' aspects and features through interaction, whereas self-ability and heritage state the innate hypothesis together with universal grammar theory. In relation to the interactionism theory is the sociocultural theory from Vygotsky. The idea that the communication between peers and mentor and others support learners with opportunities to take advantage of knowledge from outside was proved by Vygotsky (Lantolf et al., 2014; Ranjbar & Ghonsooly, 2017). There comes the process of interpersonal and intrapersonal experience. Therefore, the perception toward a second language appears and the competence of the target one follows. These theories and hypotheses were on behalf of interactionism. Generally, interactionists have supported these theories for bettering the quality of pedagogical activities due to the appropriate teaching and learning methods as the nature of language absorbing is made clear from the thin air.

All things considered, with different views of second language acquisition, all mentioned scholars and researchers shared the similar perspective that a second language from outer sources impacts the learners via certain processes. These could be viewed under psychology or linguistics even the neuroscientific field. Additionally, the processes occur thanks to the perception linking directly human body parts. This will be discussed further in correlation with a new path of studying languages named cognitive linguistics.

Cognitive Linguistics

Cognitive linguistics has been recently studied in the last forty years as this linguistics branch provides scholars with power tools for explaining the nature of language and language learning. Thanks to the mental and cognitive processes of humans, when people perceive the surrounding environment consisting of objects. The researchers of this language science field agree with the mental processes of perceiving, storing and, memorization, applying (Achard & Niemeier, 2008). Various researchers and scholars have recommended a load of definitions and descriptions so that the theories of this branch of linguistics are modified better. Over time, the more studies and research have been conducted, the clearer the theories are. Nonetheless, experientialism, based mainly on the perceiving process of human senses, allows authors to explain the conceptualism of objects containing the languages' materials in reality.

Nearly simultaneously with generative grammar in the 1970s, the hypotheses for the new way of studying the nature of languages were figured out (Jordens, 1967). This author stated that the ideas for a new path in researching language had come from the view that the combination of letters and their systematic function for meaning.

Roles of Cognitive Linguistics to Acquisition of Language

From the review of second language acquisition along with cognitive linguistics, the writers highlighted the roles of this branch of linguistics to the process of acquiring the target language as the trigger role. Linguistics could view cognitive linguistics as the science of language, which focuses on the description of symbolic systems in combination with sounds containing phonetics and phonology and syntax with the meaning (Fazalehaq, 2020). Therefore, these are the materials that learners interact with while taking second language courses. As mentioned previously, the processes of perceiving happen thanks to 5 senses of humans. Via these body parts, the perception of the sounds, utterances, and meaning appear in the human brain. With the cognition system in people's heads, there appears to be an activity of cognition (Halliday & Matthiessen, 2013). In detail, information's short-term and long-term memory (Chen & Hsieh, 2008) reformed with reinforcement. Researchers, as well, have remedied that cognitive linguistics is linked directly to learners' acquisition capability as this process happens under the

regulation of students' variation, including age, styles as well as motivation. In the Handbook of Cognitive Linguistics and Second Language Acquisition (2008), the authors proved that thinking or cognitive activities in language learning frequently occur as learners' interaction with the target language raises the requests to students for engagement. Therefore, scholars could have a perfect perspective of observing learners' process of acquiring the second language elements. Thanks to these features, cognitive linguistics has been viewed as the new and important way to study language especially in second language acquisition. On the other hand, cognitive linguistics systems including body parts with mental processes play the role of trigger for the target language absorption. As precede analysis, the mental processes of humans happen in a certain order that explain the notion of experientialism and conceptualism of language elements of sounds, letters, utterances under regulation of grammar and meaning. Therefore, without this branch of linguistics, the researchers have difficulties analyzing and generalizing the processes of taking information from outer sources of learners and then applying knowledge in reality.

In addition to the important role of the trigger in viewing the processes of understanding, memorization and application of a second language, the role of direction for better teaching and learning a second language is discussed. In the previous discussion, the correlation between cognitive linguistics and the acquisition of a target language process is viewed as a close relationship and mutual connection. Clearly, with the knowledge of cognitive linguistics of connection, instructors have a big picture behind the career of teaching languages. Accordingly, variables from learners could be considered as the key points for teachers to make decisions on the appropriate methods along with approaches to drive the knowledge to students (Verspoor & Boers, 2012). With different ages, styles, and motivators, etc., of students, lecturers would have the intention to decide the classroom teaching activities. For instance, at the elementary level, a direct method would be better for young learners to experience the vocabulary (abstract) with the object (reality). This process drives the knowledge from the experience to create concepts in learners' minds (conceptualization) through mental processes. Moreover, it is the topics and purposes of lessons that instructors apply activities to reinforce the knowledge or skills for better the quality of pedagogy. Conversely, learners (certainly at some levels) with an understanding of cognitive linguistics knowledge could take advantage of choosing the best methods for self-studying in life-long learning. This will be autonomy with a positive filter that supports students with encouragement. If so, from all things mentioned, the role of direction for choosing the methods and approaches of cognitive linguistics greatly impacts second language acquisition.

Recently, the roles of cognitive linguistics to second language acquisition could be considered being changed due to the covid-19 pandemic. In fact, the disease has spread out quickly and affected numerous aspects and fields in any society. It is believed to have caused the crisis in communication (Mutiah et al., 2020; Wodak, 2021) and the circumstance of social distance. These conditions lead to the virtual classroom and learning online system explosion. As mentioned before, the theories of cognitive linguistics and second language acquisition could be viewed as the conventional classroom providing learners environment of languages for absorption. With the theoretical framework of perception (Fang et al., 2010), it could be interpreted that the change in the learning environment could have an impact (whether it is positive or negative) on the quality of the learning process. This happens since the mental process occurs during the phases of second language acquisition, even under different lenses of theories. So far, researchers have been required to figure out whether the roles of cognitive linguistics in second language acquisition turn out to be positive or negative in a virtual classroom and online learning environment.

Generally, cognitive linguistics supports both instructors and learners for a better quality of second language acquisition. When it comes to the process of acquiring the target language, from the view of linguistics cognition researchers, mental processes, including knowing, understanding, memorization and applying, are considered the order of taking information from outer sources of learners via the senses and brain system. This branch of linguistics is the trigger of knowing the process of acquiring a second language and the direction for bettering it. The universal feature of absorption language provides scholars with opportunities to comprehend the experientialism and conceptualization of the knowledge of a second language. From these, the roles of cognitive linguistics to second language acquisition are shed light on.

Discussion of Applying Cognitive linguistics and Second language acquisition in teaching and learning languages

From the previously mentioned roles of cognitive to the acquisition of a second language, the authors would express the issues relating to the process of teaching and learning a language. First and foremost, in terms of instructing a foreign language as a second language, cognitive linguistics reflects learners' perception of the surrounding environment, including the target language. In fact, with or without effort to learn a second language, the first language has an impact on the process of getting new information as the previous knowledge influences the perception (Peregoy & Boyle, 2001). Therefore, in the phase of forming the perception of new knowledge, the lecturer, with the support of cognitive linguistics, especially experientialism to conceptualism, could design numerous activities with appropriate approaches and methods for students to understand the knowledge better. According to Efron (1969), perception is shaped with the contact of the human with the target object in reality via the feeling and observing of human senses. With the description and modification of senses interaction and target languages, the mentor could use methods for creating the perception of learners and then reinforce the perception for better memorization before providing an environment for producing or applying the knowledge that students have studied. Secondly, the definition of cognitive linguistics also focuses on people's mental processes. This means there are universal features as well as different characteristics variables coming from learners. The universal features are the similar structure of brain and mental processes of perceiving, storing and applying information that are expressed in experientialism and conceptualization of each person. This reflects the individual's styles of learning a second language. According to Peregoy and Boyle (2001) and Inoue and Bell, (2011), with the mentioned differences, there comes the demand for differentiating the tasks and methods suitable for different learners even if they are peers in the same classroom. Last but not least, from the view of learners, the processes of knowing and understanding in phase of having perception or experiencing the knowledge of target materials and the sequent processes of storing the language materials for shaping memory including long term and short term one and applying the second language, in reality, so-called competence could be comprehended will support students much. Learners will be benefited from knowing the preceding processes occur in an order as they regulate themselves for their work more effectively and productively. Combined with the specific styles of each person, cognitive linguistics enables students to choose the best way to learn, practice and apply the second language. This is in line with the ideas of perceiving, practicing, and producing phases that are mentioned in the book of Nunan (1991) about the method of instructing languages. In addition, learners with knowledge of cognitive languages could take advantage of actively absorbing the language by themselves. In fact, the process of acquiring a second language is widely considered implicitly. Nevertheless, studying with intention requires students to pay attention and make efforts, which certainly costs time and other things. Thanks to cognitive linguistics, learners, yet could reduce their efforts to more easily understand the second language and

practice for reinforcement together with higher competence. This could be figured out due to the fact that the learners could opt for the time along with tasks and topics for their language acquisition. The active choice made by students could be understood by another hypothesis from Krashen named Affective Filter (VanPattern & Williams, 2014).

In relation to the covid-19 crisis of the traditional classroom for preventing disease spread (Nguyen & Ngo, 2021), the roles of cognitive linguistics have been supposed to change; therefore, applying these roles and functions in teaching and learning languages change, as well. In fact, with the great support of technologies in general and the application of virtual classrooms in specific, the lecturers and students have chances to interact in the environment of language pedagogy (Wendy, 2021). This is full of media materials and interactive patterns that could be interfered with when they come up in a traditional classroom. With the shift from the conventional experience of experiencing concrete objects, the learners and students witness the second language acquisition of mental processes through media materials. This leads to the regulation of instructors of methods and approaches as well as the skills of using computer-assisted language learning (CALL) systems. On the surface, there seems to be no link between these things. Nonetheless, a well understanding CALL could support the lecturers to provide a better experience of lessons for students. (lack of source)

Conclusion

In general, the paper aims to provide a spotlight on the roles of cognitive linguistics in second language acquisition. By reviewing the remarkable theories of language acquisition and examining the theories of cognitive linguistics, the writers try to explain the role of the trigger and direction of cognitive linguistics in acquiring the target language. The processes of mental and cognition via sense activities and mental actions support humans' capability for knowing, understanding, storing, memorizing, and applying language. That is key in triggering the process of studying language effortlessly. In addition, cognitive linguistics also provides scholars the ability to understand the direction for designing suitable teaching and learning methods due to the fact that, based on this linguistics field, they could understand the personality styles of learners (Luo, 2021). Based on the roles of cognitive linguistics, which has been considered the new way and outlook for studying language, the methodology scholars have conducted research for bettering the pedagogical activities of teaching and learning language, especially the second language.

The authors make efforts to highlight the roles of cognitive linguistics to second language acquisition with mentioned and discussed arguments. In detail, the paper reviews some theories and hypotheses in second language acquisition and cognitive linguistics to determine the correlation between these branches. Further research with appropriate methods could provide a firm statement rather than the theories reviews. Moreover, the writers strongly suggest future research on the theories of online learning via virtual classrooms about second language acquisition under the view of cognitive linguistics.

References

Alemi, M., Sarab, M. R. A., & Lari, Z. (2012). Successful learning of academic word list via MALL: Mobile assisted language learning. *International Education Studies*, *5*(6), 99–109. https://doi.org/10.5539/ies.v5n6p99

Chambers, J. K. (2007). Sociolinguistics. In *The Blackwell Encyclopedia of Sociology* (pp. 1–4). Blackwell. https://doi.org/10.1002/9781405165518.wbeoss204

Chen, N., & Hsieh, S. (2008). Effects of Short-Term Memory and Content. *Language Learning & Technology*, *12*(3), 93–113.

Efron, R. (1969). What is perception? In *Proceedings of the Boston Colloquium for the Philosophy of Science 1966/1968* (pp. 137–173). Springer Press.

Evans, V. (2012). Cognitive linguistics. *Wiley Interdisciplinary Reviews: Cognitive Science*, *3*(2), 129–141. https://doi.org/10.1002/wcs.1163

Fang, R. J., Tsai, H. L., Lee, C. J., Chang, Y. H., & Tsai, T. S. (2010). A study of theoretical framework on the perception of web-based self-directed learning environment. *Proceedings of the 10th WSEAS International Conference on Multimedia Systems and Signal Processing, MUSP '10, March 2012*, 187–192.

Halliday, M. A. K., & Matthiessen, C. M. I. M. (2013). Halliday's introduction to functional grammar: Fourth edition. In *Halliday's Introduction to Functional Grammar: Fourth Edition*. https://doi.org/10.4324/9780203431269

Y. Inoue & S. Bell (2006). *Second Language Acquisition and Online Learning*. IGI Global. https://doi.org/10.4018/978-1-59140-723-2.ch007. https://doi.org/10.4018/978-1-59140-723-2.ch007

Lantolf, J. P., Thorne, S. L., & Poehner, M. E. (2014). 11 Sociocultural theory and second language development. In B. VanPattern & J. William (Eds.), *Theories in Second Language Acquisition: An Introduction* (2nd ed., pp. 207–226). Routledge.

Luo, H. (2021). Cognitive Linguistics and Second Language Acquisition. *The Routledge Handbook of Cognitive Linguistics*, 556–567. https://doi.org/10.4324/9781351034708-37

Moore, J. (2011). BEHAVIORISM. *The Psychological Record*, *61*, 449–464. https://doi.org/https://doi.org/10.1007/BF03395771

Mutiah, T., Fitriyanto, F., Sapitri, J. E., Albar, I., & Ode, Y. M. La. (2020). Effectiveness Of Communication In An Organization In The Crisis Period Of Covid-19. *FACULTY OF SOCIAL AND POLITICAL SCIENCES UPN Veteran Jakarta*, 24–31. http://www.ehow.com/info_10063999_disadvantages-communication-organization.html

Nguyen, B. V., & Ngo, T. C. T. (2021). Using the internet for self-study to improve translation for English-majored seniors at Van Lang University. *International Journal of TESOL & Education*, *1*(2), 110–147. https://i-jte.org/index.php/journal/article/view/43/16

Nunan, D. (1991). *Language teaching methodology: a textbook for teachers* (p. 139).

Peregoy, S. F., & Boyle, O. F. (2001). *Reading, Writing and Learning in ESL A Resource Book for Teaching K-12 English Learners* (D. Lorenzo (Ed.); 7th ed.). Pearson.

Tran, T. T. (2013). Factors affecting teaching and learning English in Vietnamese universities. *The Internet Journal Language, Culture and Society*, *38*(January 2013).

VanPattern, B., & William, J. (Eds.). (2014). *Theories in Second Language Acquisition: An Introduction* (2nd ed.). Routledge.

VanPattern, B., & Williams, J. (2014). 2 EARLY THEORIES IN SLA. In B. VanPattern & J. Williams (Eds.), *Theories in Second Language Acquisition: An Introduction* (2nd ed., pp. 17–33). Routledge. https://doi.org/https://doi.org/10.4324/9780203628942

Wendy, T. (2021). Communicative Language Teaching (CLT) in the context of online Learning: A literature review. *International Journal of TESOL & Education*, *1*(2), 65–71. https://i-

jte.org/index.php/journal/article/view/23

White, L. (1987). Against comprehensible input: The input hypothesis and the development of second-language competence. *Applied Linguistics*, *8*(2), 95–110. https://doi.org/10.1093/applin/8.2.95

Biodata

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