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THE RELEVANCE OF DEVELOPING ADOLESCENTS' COGNITIVE PROCESSES IN ENGLISH LANGUAGE TEACHING

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Abstract

As adolescence is a critical developmental period characterized by rapid cognitive, emotional, and social changes that directly influence students' learning capacities, English language teaching has become a key component of secondary education. This paper highlights the relevance of developing adolescents' cognitive skills while teaching English language, as language learning is the natural, conscious, and inadvertent learning, it is fully connected with psychological process, that's to say cognitive skills of the language learners. As well, actuality of development of adolescents' cognitive processes in teaching English languages is given in the paper.

Keywords: Cognitive process, brain, language teaching, learning capacities, brain development, prosocial behavior, emotional, prefrontal cortex.

Introduction

The adolescent years mark a critical period of brain development characterized by extensive structural and functional changes. During this phase, the brain undergoes significant transformations that impact various cognitive processes. Traditionally, language learning approaches have focused on explicit instruction, memorization, and rote learning techniques. By investigating the brain processes that occur during adolescence, instructional methods can be developed that align with the cognitive and neural conditions of certain regions of the brain with relevance in cognitive processes such as a second language acquisition. As adolescence is a critical developmental period characterized by rapid cognitive, emotional, and social changes that directly influence students' learning capacities, English language teaching has become a key component of secondary education. However, effective language acquisition during adolescence depends not only on instructional strategies but also on the underlying psychological mechanisms that shape cognitive development. Understanding how attention, memory, motivation, metacognition, and higher-order thinking skills evolve

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during this stage provides valuable insight into how adolescents process linguistic information and acquire communicative competence in a foreign language.

Recent educational research highlights that adolescent learners engage with language input through complex cognitive processes that are influenced by neural maturation, social identity formation, and intrinsic motivational factors. Setting apart the physical growth occurring in adolescence, both social, emotional as well as cognitive development are related to processes occurring inside a common core: the brain. The brain is one of the most complex components of the human body, in charge of controlling most of the functions in the organism, interpreting information from the surrounding and carrying out every cognitive process. During the adolescent years, the brain undergoes a series of remarkable transformations, particularly in its structural composition and connectivity. These modifications are intricately linked to the emotional, social, and cognitive development observed in teenagers. For instance, one of the notable processes occurring during this period is known as "neuronal pruning." This process allows the brain to optimize its functioning by strengthening important neural pathways while eliminating unnecessary ones. This refinement process contributes to the shaping of cognitive abilities and behavioral characteristics observed during adolescence. Given these interrelated factors, exploring the psychological foundations of cognitive development in adolescence is essential for designing effective English language teaching practices. By examining how cognitive processes operate and how they can be supported through pedagogical interventions, educators can better foster language proficiency, learner autonomy, and long-term academic success.

Materials and Discussions

Meanwhile, in terms of societal relations, adolescence is a phase marked by heightened susceptibility to social influence. Neuroscientific investigations (Foulkes and Blakemore, 2016) have revealed that this sensitivity occurs because, due to the high activation of the nucleus accumbens within puberty, social stimuli is internalized in the same way that it is a reward, resulting in similar levels of dopamine production. Furthermore, teenagers exhibit enhanced activation in fronto-striatal brain regions not only in response to rewarding social stimuli but also to negative social stimuli. The findings suggested that adolescence is characterized by a state of heightened sensitivity to both positive

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and negative social stimuli. Other studies have also put the attention on understanding how the adolescent brain acts within social contexts (Van Hoorn et al., 2016). This has been conducted by measuring the neural activity associated with the influence of peers on prosocial behavior. The findings from the study indicate that when adolescents were in the presence of their peers, they exhibited heightened levels of prosocial behavior. This effect was particularly pronounced when peers provided positive feedback in response to specific actions. For instance, the study observed that during decision-making situations, adolescents were more inclined to engage in riskier conducts when peers were present. In these instances, peers tended to offer positive feedback, which functioned as a "reward" for the exhibited prosocial behavior. Furthermore, neuroimaging data revealed increased activity in specific regions of the prefrontal cortex during the decision-making process when adolescents were accompanied by their peers.

Learning a language is much easier by exposing learners to a variety of meaningful experiences in which they use language as well as express and share thoughts to create and re-create knowledge. Bloom (1981) classifies the cognitive process into six levels of increasing complexity. It goes from knowledge as the basic level, through comprehension, application, analysis and synthesis, to evaluation at the highest level. The importance of this classification lies in how it helped us to encourage meta-cognition in our students' learning processes. It means that the most "sub-conscious" thoughts can be brought to "consciousness" and thus they become more teachable. Reading, listening, speaking and writing can be seen as important mechanisms in cognitive changes, and in the building and transmission of knowledge. Reading, listening, speaking and writing cannot be considered as natural in children's development. They are cultural products that are learned not only through interacting with others, but also through formal teaching and learning processes. Nowadays, there is an agreement in considering reading, listening, speaking and writing as cognitive skills that include complex strategies with lots of psychological processes integrated. Thus, this project will be focused on reading, listening, speaking and writing as the baseline for working on different language skills and for developing cognitive processes based on Bloom's categories.

"Language has the power to shape cognition, behavior, and even the form and function of the brain" (Hayakawa & Marian, 2019, p. 1). Again, neuroimaging reveals the consequences of multilingualism in the structure and function of the brain. The key feature of multilingual cognition is that two or more languages can

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become activated at the same time; this requires mechanisms to control interference. Hayakawa and Marian (2019) discussed the neurofunctional and neurostructural changes due to the experience of juggling multiple languages within a single cognitive system.

All in all, language learning is the natural, conscious, and inadvertent learning of a language. In a bilingual or multilingual society, this generally happens. Formal language education with teachers, materials, and learning aids occurs in the classroom and other settings (Kuha et al., 2018; Pilao et al., 2019).Therefore, the phrase 'linguistic learning' is used in this study, which refers to the proceedings in the formal education of a person masters of a second or another language. Although employers acknowledge that most graduates are knowledgeable, they are also complaining that varsities are not producing quality output for them as most graduates lack soft skills (Pilao et al., 2017).

Conclusion

The English language is highly complicated that includes not only speech, but body language, and sign language for those who are speech impaired. While the aspect of cognitive psychology contain problem-solving, decision making, learning and speaking, all compare to language and language processing. That's why, language learners face great cognitive issues when dealing with acquisition of a new language. They must struggle with a dissimilar organization of the target language's sound system and with the matching of new meaning units into words. Moreover, they have to learn the rules of sentence construction and the way those sentences are used in diverse contexts. In this second language acquisition attempt, learners habitually begin with limited resources, relying only on their basic understanding of language structures, which is obviously based on their first language experience, which isn't always a good resource of previous knowledge. As this paper has shown, adolescence is marked by significant transformations in attention, memory, metacognition, motivation, and higher-order thinking each of which directly influences how learners perceive, process, and produce language.

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