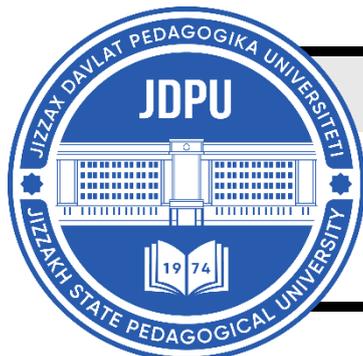


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THE IMPACT OF CRITICAL PERIOD HYPOTHESIS ON LEARNERS' SECOND LANGUAGE ACQUISITION

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ABOUT ARTICLE

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Abstract: The critical period hypothesis is a theory in the field of applied linguistics that suggests there is an optimal window of time during which individuals are best able to acquire a second language. This hypothesis posits that if language learning does not occur within this critical period, it becomes significantly more challenging for individuals to attain native-like proficiency in a second language.

This paper offers a brief but broad overview of the origins of the critical period hypothesis, the evidence supporting and contradicting this theory, and its implications for language acquisition and education. Additionally, it discusses the potential impact of neuroplasticity and age-related cognitive development on language learning abilities, as well as practical applications of the critical period hypothesis in educational settings.

INTRODUCTION

The critical period hypothesis is a theory in linguistics that suggests there is a specific window of time during which individuals are most receptive to acquiring language. This hypothesis suggests that there is a critical period in early childhood, typically before puberty, during which the human brain is most receptive to language learning. After this critical period, it becomes increasingly challenging for individuals to attain native-like proficiency in a new language. A large amount of empirical evidence shows that age of acquisition is strongly negatively correlated with ultimate second language proficiency for grammar as well as for pronunciation. It is even doubtful that any evidence exists at this point of any person having learned

a second language perfectly in adulthood. Some researchers have rightly pointed out that correlation is not causation, and that the age effect may be caused by confounded variables such as quantity and quality of input, amount of practice, level of motivation, and other social variables. Many studies, however, have shown that these variables play a very limited role when the effect of age of acquisition is removed statistically, but age of acquisition keeps playing a large role when the social and environmental variables are removed. Other researchers have objected to a “critical period” interpretation of such age effects because these do not show the discontinuities that would be expected under the critical period hypothesis. However, quite a few studies have documented discontinuities, and that their absence in some studies may be because of a variety of confounding variables and other methodological problems. Assuming there is indeed a maturational decline in second language learning capacity during childhood, then there is a need to investigate whether this decline affects competence, performance, or both and what the ultimate cause of this decline is. Increasingly, evidence points toward fundamental maturational changes in certain aspects of memory. The challenge for critical period researchers is to tie such changes to both specific neurological antecedents and specific psycholinguistic corollaries. Regardless of one’s view of the critical period, it is important not to overinterpret its implications for educational practice. The observation that “earlier is better” only applies to certain kinds of learning, which schools typically cannot provide. Therefore, the implication of critical period research seems to be that instruction should be adapted to the age of the learner, not that learners should necessarily be taught at a young age.

The CPH has been a topic of ongoing debate and research within the field of second language acquisition. Some scholars support the hypothesis, citing evidence from studies of second language acquisition and brain development. Others are more skeptical, arguing that individual differences and environmental factors also play significant roles in language acquisition. Studies have examined the effects of age on language learning, with many evidences to support the idea that younger learners are more successful in acquiring native-like pronunciation and grammar skills. However, there is also research that challenges the notion of a strict critical period, suggesting that individual differences and environmental factors play a significant role in language development.

The basic goal of this review is to investigate the origination of the CPH and its impact on learners` second language acquisition.

THE MAIN RESULTS AND FINDINGS

The critical period hypothesis is defined as the crucial period in second language acquisition as in this period an individual can acquire a new language in native-like competence. Regarding this issue, Canadian neurosurgeon Penfield (1959) put forward the advantages of learning a language at an earlier age. One of the prior benefits regarding this fact was that two hemispheres

of children`s brains operate simultaneously (Scovel, 2000). Scovel stated that Penfield`s investigation influenced the formation and development of CPH in the field of applied linguistics. Lenneberg (1967) who refined Penfield`s concept of second language learning stated that there is a certain time, which is known as pre-puberty, a period when effective L2 acquisition occurs. He investigated the connection between brain changes and the age of language acquisition. The principal objective of his studies was to ascertain a particular age when the acquisition of L2 is not effective to some extent. He researched the first language development in deaf children and with those who had a serious cognitive decline. The results showed that there were structural changes in children`s brains during the age of puberty (Schouten, 2009). According to Lenneberg`s concept, the brain can obtain a full native competence between infancy and pre-puberty (2-12ages) (Schouten, 2009). Research using neuroimaging techniques has shown that the brain undergoes significant changes during early childhood, which may make it more receptive to learning certain skills, including language. This suggests that there may be biological mechanisms underlying the critical period for learning.

One of the most well-known studies supporting the CPH is the case of Genie, a young girl who was severely isolated and abused for the first 13 years of her life. Despite receiving intensive language instruction after being rescued, Genie never reached full proficiency in language, leading researchers to believe that there is indeed a critical period for language acquisition.

The following research was conducted by Hakuta, Bialystock, and Wiley (2003), the scholars who aimed to identify the impact of the critical period on L2 learners` language development. They observed Chinese and Spanish people who immigrated to the US and had been living for 10 years by the time of the test. The data collected from the case study has proven the results of the previous research. Studies have found that individuals who are exposed to a second language early in life, particularly before the age of 7, tend to achieve greater proficiency and native-like pronunciation compared to those who start learning the language later in life. This supports the idea that there is a critical period for language acquisition. Another study has shown a pattern of decline in language attainment in terms of age factor (Johnson and Newport 1989, 1991). The researchers like Johnson and Newport investigated the relation of maturational period and children`s abilities to

acquire a new language. The prime objective of their study was to verify or contradict the existence of age-related factors on second language acquisition. They observed 46 native Korean and Chinese people who immigrated to the United States of America between the ages 3 and 39, and the rest of the people were at the ages between 3 and 26. However, the second group of people had been living there by the time of the examination. The participants were tested in terms of grammar competence of English language (Schouten, 2009). The results supported the previous

investigations regarding age factors as immigrants who arrived earlier, showed relatively higher results than those who came later. Studies have also found that adults who learn a second language after the critical period may struggle with certain aspects of grammar and pronunciation, further supporting the idea that there are developmental windows for optimal language learning. Johnson and Newport's (1989) research data is similar to the study that was conducted by Oyama (1978) and Patkowski (1980). These researchers studied constant variables on language comprehension of people who immigrated to the United States of America. They ascertained that the age of the individual greatly influences mastering the second language. In Jonson and Newport's study, the participants who were between the ages 3 and 7 achieved native-like proficiency (Schouten, 2009). Another age group that involved participants between 8 and 10 showed relatively high results in grammar tests, however, the scores were lower than the former age group. The third age group participants who learned English at the ages 11 and 15 performed lower points than the previous two groups. The results of case studies signify that the age of exposure is crucial in achieving success in second language acquisition. According to Long (1990) and Patrovski (1994) individuals can obtain a native-like accent when they are exposed to the second language at the early stages of their life. Later this idea was claimed by other researchers like Scovel (1988) and Schouten (2009). Several studies have proven the perception of the belief "the younger the learner, the quicker the learning process and the better the outcomes". To verify this statement, it is worth mentioning a large-scale investigation that was implemented by Abrahamson and Hyltenstam (2009) putting forward the issue of ultimate attainment in native-like competence. The research involved 195 native Swedish and Spanish people whose language exposure started between the ages 1 and 49. The participants were tested in terms of phonetics, lexicology, and grammar. The methodology of the case study was relatively challenging and it aimed to analyze second language attainment. The findings of the experiment demonstrated that the individuals who started learning a second language after puberty, namely after 12 were not able to score high results, however the children who were exposed to the second language before puberty managed to display a native level. These scholars have also confirmed the widely accepted phenomenon that children are superior to adults in second language acquisition at high levels. If adults learn a new language in the first months or year of their lives, they tend to acquire it easily and get benefit from the acquisition in terms of vocabulary and grammar. However, when children start learning a second language at earlier ages, they can get long-term input. Regarding peak proficiency, individuals whose language exposure begins from infancy or a very early age can master the language like language users. When the age of exposure rises, the opportunity to acquire a new language decline. Young learners of the English language regarding their level of proficiency were influenced by their exposure to the language as most researchers focused on the time of individuals' arrivals into

the second language country or on the age when they started using the language. This phenomenon found its verification in the studies of Asher and Garcia (1969) as well. The findings supported the previous fact about earlier arrival to the United States of America. In general, findings seem to support the well-known “earlier the better” tendency. In addition to the all above-mentioned researches, it is important to highlight such scholars as Singleton, whose age-related studies influenced significantly the field of second language acquisition.

Birdsong's research on second language acquisition is focused on the critical period hypothesis, which suggests that there is a specific window of opportunity during childhood in which individuals are most easily able to acquire a second language. Birdsong's work has challenged this hypothesis by showing evidence that adults can also successfully learn a second language, although typically not as proficiently as children who acquire languages during the critical period. He has also explored the role of age, aptitude, and motivation in second language acquisition, as well as the impact of individual differences on language learning outcomes. Overall, Birdsong's research has contributed significantly to our understanding of how second languages are acquired and the factors that influence successful language learning.

CONCLUSION

The theory of CPH suggests that there is a biologically determined period during which an individual must be exposed to language in order to achieve native-like proficiency.

The issue of the impact of the age factor on second language acquisition has been a crucial and controversial topic in the field of applied linguistics. Although there have been opponents of the existence of a critical period for L2 learners, a considerable amount of studies has shown a shred of evidence that age is the prior and influential factor in second language acquisition. Research on the CPH has explored the idea that there may be an optimal window of time during childhood for language learning, after which it becomes much more difficult to acquire a new language.

Based on the findings of the researches, it is considered that the young learners tend to obtain a native accent relatively higher and faster than the older learners. It supports and encourages individuals to learn a target language as earlier as possible. However, it does not indicate that adults or individuals after the age of puberty are not able to acquire a second language. The learning process would seem to be less effective and challenging for them as their brain does not function as at an early age. Overall, after reviewing several studies implemented regarding this issue it is important to mention that the age of the learner does impact greatly on learners` language attainment. The effects can be seen in terms of grammar competence, pronunciation, accent, vocabulary, and behavior. The critical period hypothesis continues to be an important topic of

study in the field of second language acquisition and has implications for language education and development.

Overall, research on the Critical Period Hypothesis has provided valuable insights into the complexities of language acquisition and the role of age in learning a new language. It remains a topic of ongoing debate and investigation in the field of linguistics and cognitive science.

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