

Exploring the Critical Period Hypothesis: A Comparison of L2 Children and L2 Adults

Zhongxi Ye, University of Wales, Trinity Saint David

Abstract

Critical Period Hypothesis (CPH) posits that second language acquisition (SLA) can only be achieved up to a native-level proficiency at a given stage, beyond which it becomes increasingly hard to master a second language (L2). First presented in 1967, this theory has informed research in the field of language acquisition both in the context of L1 and L2. However, this paper focuses on the CPH in second L2 learning in adults and children. Drawing from studies on L2 in children and adults, this analysis outlines the similarities and differences in these two groups while presenting a discussion on the implication for teaching and future research directions in language instruction and learning.

Key Words: *Critical Period Hypothesis, Second Language Acquisition (SLA), Second Language (L2), Language Acquisition.*

Introduction

Originally proposed by Lenneberg (1967), the Critical Period Hypothesis (CPH) contend that there is a critical period in childhood when the brain is particularly receptive to language acquisition. Beyond the critical period, acquiring language becomes harder, and individuals' brains become more unreceptive to learning a new language and may never reach proficiency levels similar to natives of the target language. While the theory was originally used in the research of first language (L1) acquisition, more recent research has extended the use of this theory to include different categories of language acquisition, such as Second Language Acquisition (SLA). With sustained interest in the topic of CPH in SLA, understanding the role of age and other factors in Second Language (L2) acquisition can have important implications for language teaching and learning for different learners in different contexts.

Second language acquisition remains an extensive field of inquiry even for language researchers. Owing to the dynamic nature of language and the interconnected factors that influence how individuals interact with, use, and acquire language proficiency, concepts such as CPH remain widely contentious (Dörnyei & Mentzelopoulos, 2022). Looking at the prevailing context of L2 children and L2 adults, the theory might argue strongly in favor of L2 children as far as L2 acquisition is concerned. However, motivation and interaction with a second or foreign language can enable individuals past Lenneberg's proposed 'critical period' to acquire native-like proficiency levels in the second language in question.

The occurrence of the critical period effect is one of the strongest arguments in favor of CPH. The critical period effect enables individuals who are exposed to a second language before reaching a specific age to develop native-like skills in that language (Dollmann et al., 2020). However, the CPH has been criticized. One of the main criticisms is that it oversimplifies the

complicated and multidimensional language learning process. Several research has questioned the notion that there is an age limit beyond which language acquisition is impossible. Instead, these studies have pointed to the possibility that other factors, such as ability, exposure to the language, and motivation, may all contribute significantly to language learning.

Literature Review

Theoretical Background

Behavioral research resembling a direct test of CPH for first language acquisition has been accessible since Lenneberg's writing. One well-known example is the story of Genie, a child who was denied speech and social interaction until when she was thirteen. (Curtiss, 1977) asserted that the CPH was confirmed by her apparent verbal incompetency, notably in syntax, after seven years of recovery. However, the unusual circumstances in which Genie was raised, including social adversity, nutritional, and cognitive, caused some researchers to wonder whether her language impairments were solely due to a lack of language exposure in her formative period. According to Alzahrani (2020),

“Geny had deficiencies in both the comprehension and production of language; that is, she could not reach native proficiency. Because she did not use the left hemisphere of her brain for language acquisition in the very early stages of her life, she lost native capabilities of language acquisition. Geny’s case may prove the CPH (pg. 26).”

However, other studies have confirmed that instances abound whereby late learners successfully acquire vocabulary and semantic processing. Such findings situate the hypothesis in a wider context of formal language properties that focus on elements such as syntax, phonology,

and morphology rather than the processing of sense from a given language. This further highlights the possibility that different aspects of language may be variedly dependent on exposure. Different scholars present different approaches to understanding the interplay between age and language acquisition in individuals (Bülow & Pfenninger, 2021; Duff, 2019). However, even with such freedom to explore different viewpoints, there is a seeming convergence towards a belief in the faster and more proficient acquisition of language in children as compared to their adult counterparts.

Language Acquisition

Alzahrani (2020) compares and contrasts L2 acquisition in children and adults, outlining a robust approach toward the possible elements that influence language education. Moving away from informal language acquisition, the author confirmed a disparity in language acquisition among these two groups where formal instruction was involved. Contrary to the hypothesis earlier defined, a formal setup of language education established that adults perform better in explicit acquisition. Children showed a better rate of acquisition through implicit interaction with language. This means that children tend to acquire language subconsciously as they get exposed to and interact with a target language. As such, children are better placed to profess a heightened level of mastery of such languages, with a possibility of acquiring other characteristics of the target language that would make them reach native-like proficiency.

Motivation

Ellis (1997) defined motivation as “the attitudes and affective states that influence the degree of effort that learners make to learn an L2” (p.75). The importance of motivation in learning a second language (L2) cannot be overstated. It refers to the internal reasons that push humans to

acquire and use a new language. An individual's goals, interests, and worldview shape their level of intrinsic (inner) and extrinsic (outside) motivation. Learning a new language out of one's own enthusiasm, curiosity, or desire to improve oneself is an example of intrinsic motivation. However, when an individual is motivated by things outside of themselves, such as prizes or praise from others, this is known as extrinsic motivation. The extent to which a person is motivated to learn a language affects the time and energy they devote to the learning process (Ehsan et al., 2019). People who are intrinsically motivated to learn a language are more likely to persevere through setbacks and become proficient in a language.

Grammatical Competence

Bilinguals can be categorized depending on how well-versed they are in their respective language. Achieving native-like control in the linguistic domains of phonology, morphology, syntax, semantics, or pragmatics might be considered to be a sign of grammatical competency. Grammatical competency is typically measured on a scale where native-like control is the absolute threshold, as in the case of the ability to mark verbs with both regular and irregular past tenses in English (Herschensohn, 2022). Phonology, morphology, and syntax are the three areas of grammar proficiency that are most frequently tested. When there is significant social and dialectal variance in the standard, caution must be exercised when utilizing native-like control as a benchmark. For instance, South Asians frequently encounter a form of English known as "World Englishes," which differs significantly from normal English in terms of both linguistic and social traits. Additionally, many immigrants in the United States are exposed to non-conventional variants of English in the classroom, such as Black English or African American Vernacular English.

Learners' Understanding of L2 Words Meaning

The study by (Poarch et al., 2015) on fifth-grade Dutch students' acquisition of L2 English sheds important light on the initial phases of L2 learning and its consequences on L1 recognition. The findings imply that the students were able to access word meanings in the L2 language and use word-to-concept mappings to identify L2 terms in L1 contexts. However, there are potential bias that was not factored in the analysis of observations. First off, the L2 to L1 translation recognition task was the only task employed in the study to evaluate the learners' proficiency. The whole spectrum of language abilities necessary for successful L2 acquisition, such as speaking, writing, and listening comprehension, was not covered by this exercise (Baker, 2001). Additionally, the study failed to account for variations in the learners' L2 proficiency levels that would have affected the outcomes. Higher L2 competence levels may have given learners the ability to distinguish between proper and erroneous translations of L2 words.

Similarities and Differences of Child and Adult L2 Acquisition

Similarities

The comprehension of these two types of acquisition can be improved by carefully contrasting L2 development in children and adults. However, conducting such a child vs. adult L2 comparison has several empirical and conceptual concerns. Several additional factors as possible must be controlled for to assess the differences and similarities between these two learner groups in their learning of a certain Target Language feature. Comparing children and adults from similar linguistic backgrounds makes it simple to control for L1 transfer. If there is a transfer, it should be consistent across both groups (Puig-Mayenco & Rothman, 2020). Testing L2 children when young is necessary to study children's L2 development. As a result, L2

children and adults are inevitably different from one another based on their age at the time of assessment. The kinds of tasks that can be employed, whether they are experimental or not, are significantly impacted by this.

Children and adults alike, when first learning a new language, rely substantially on exposure to environmental speech. Children are immersed in the language from the moment they are born, and their developing brains are wired to make rapid progress in language learning. They are able to construct their own language by recognizing and generalizing linguistic patterns in the experience they acquire (Baker, 2014). Adults, like children, need immersion in a new language in order to master it. Adults, however, may be exposed to a different variety of information than children. Formal language classes and clear explanations of grammatical rules may be more readily available to adults.

In addition, adults may be better equipped with metalinguistic information and techniques for language learning. However, fossilization presents a point of difference between the two groups. Fossilization, or the tendency for learners to produce errors in their L2 that are resistant to correction, is one area where there may be a difference between children and adults (Mwiya, 2021). Children, according to the findings of certain studies, may be more resistant to fossilization and more likely to attain native-like competency in a second language, whereas adults may find it more challenging to overcome fossilized errors.

Differences

Affective aspects of language learning are those elements with an impact on students' emotions and social interactions when they are acquiring the language. Affective considerations may be less important for children than they are for adults because they spend so much time in

the environment of the target language and do not have as much control over their language acquisition. Children may also be less motivated and engaged because they lack an appreciation for the cultural and social relevance of the target language (Darvin, 2019). However, adults may benefit greatly by attending to their emotions when learning a second language. Anxiety, self-efficacy, and identity are some of the emotional and social aspects that might have an effect on an adult learner's motivation and engagement. When learning a new language as an adult, one common challenge is overcoming the natural inhibitions associated with speaking in front of others. Motivation to acquire a new language among adults is sometimes affected because doing so can threaten existing identities and social roles within their native language community.

The function of cognitive development in L2 acquisition is one area where children and adults differ significantly. Language acquisition is simplified by children's greater neuroplasticity and cognitive flexibility compared to adults. Adults, on the other hand, benefit from a more fully formed cognitive system that facilitates their grasp of the new language's grammar and syntax. In addition, children are more likely to pick up the language unconsciously through exposure and contact with classmates and caregivers than adults, who often employ more intentional and conscious methods of acquisition (Malachowski et al., 2023). The success and speed with which a second language is learned could be affected by these varying approaches to study. There exists a lot of variety among both groups, implying that this distinction is not absolute. While some children may have trouble picking up a second language for different reasons, some individuals can become fluent in a second language through total immersion and consistent practice.

Synthesis

Learners of a second language as children and as adults have very different experiences and outcomes. Children still developing cognitively and linguistically have an advantage when it

comes to learning a second language. However, it can be more difficult for people to learn a second language because of the interruption from their original language. According to studies, numerous variables make it easier for kids to pick up a second language than it is for most adults (Brysbaert, 2019; Peters, 2019). A child's brain is more flexible and still developing, making it ideal for language learning. Young children have a greater learning capacity than adults because of their innate curiosity and motivation to expand their knowledge. Language learning is also facilitated when children are exposed to the target language in a natural setting, such as at school or in social interactions with family and friends.

L2 adults do, however, also benefit in some ways from acquiring second languages. Adults can acquire more abstract grammar rules and linguistic concepts since their cognitive systems are more evolved (Ellis, 2019). L2 adults also have a wider variety of life experiences and information that they can draw upon to relate to and comprehend the new language. Adults who are studying a language can frequently apply metalinguistic knowledge—knowledge of how language functions—to their studies. Despite these benefits, L2 adults frequently have more trouble learning a new language than do L2 children. Adults may find it difficult to discern between the new language's sounds, vocabulary, and grammatical rules and those of their original language, which can be a significant impediment to language learning.

Implication for Teaching

According to Paradis (2019), there are significant implications for language instruction based on the similarities and contrasts between second language (L2) acquisition by children and adults. In particular, educators might benefit from reflecting on the significance of input and fossilization in language learning by applying this knowledge to their own pedagogical approaches and the development of student-centered language learning environments. Teachers

should give students many chances to hear authentic, natural, and meaningful input in the target language. In order to accomplish this, it is necessary to surround oneself with actual language input like movies, podcasts, and written texts. Teachers can also facilitate authentic communication and cultural understanding between students and native speakers through games, dialogues, and simulations.

In order to help their adult learners acquire a second language successfully, teachers should be cognizant of the significance of emotional elements and work to cultivate a safe, stress-free classroom environment. Building a feeling of community and shared goals among learners can be accomplished in a number of ways, including by offering feedback and encouragement that stresses effort and progress over perfection and by providing opportunities for good social interactions in the target language (Yates et al., 2021). Teachers can also guide adult students toward healthier coping mechanisms by introducing practices like mindfulness, cognitive restructuring, and goal-setting. Teachers can additionally help students overcome their own biases and misconceptions about the people who speak the target language by providing them with information about and exposure to such communities.

The function of the teacher as a facilitator of interaction is explicitly emphasized in interactionist approaches to language pedagogy. This method draws from learning a language through interactions in which meaning is negotiated and communicated. Students are expected to take an active role in their education and are held accountable for their own development under this strategy. One of the key advantages of interactionist methods is that it allows students to practice language use in authentic and relevant situations (Azkarai et al., 2022). This method stresses the use of real-world materials and projects, which have been shown to inspire students and give them a sense of mastery as they improve their language skills. Learners' self-assurance

and linguistic competence can both benefit from interactionist methods, which encourage them to take risks and experiment with the language.

Conclusion

The critical period hypothesis (CPH) postulates that language acquisition is more efficient and easier during a designated critical period in an individual's development. The essential period for language acquisition, according to the theory, ends around puberty, and after that, it gets harder to learn a second language fluently. Studies of language learning in people deprived of language contact throughout their early years serve as the foundation for this theory. The theory indicates that adult learners may never reach native-like ability, which has significant consequences for second language acquisition (SLA). Recent studies have refuted the validity of the theory, demonstrating that language acquisition could be feasible at any age.

Teachers may find it easier to teach a second language to various age groups if they are aware of the parallels and variations between L2 learning in children and adults. Both children and adults need exposure to the target language in order to learn it. However, because of the development of their brains, children are more naturally inclined to learn the language faster. On the other hand, adults may gain from formal language instruction and metalinguistic knowledge. While children gain more neuroplasticity and cognitive flexibility, adults benefit from a more fully developed cognitive system that makes it easier for them to understand grammar and syntax. Teachers should emphasize the affective components of adult language acquisition and offer students authentic, relevant input.

Further research into the efficiency of various language learning and instruction methods for people of all ages and language learning backgrounds may yield insightful information about

how to maximize language learning outcomes. The potential for interventions or tools, such as the use of technology and immersive language learning settings, to improve language learning both during and after the critical time could also be explored through research. It could also be interesting to look into how various second language learning environments, pedagogical strategies, and instructional technologies affect second language acquisition throughout the crucial period. This could narrow down further to the neurological mechanisms supporting the crucial period theory, the possibility of neural plasticity, and intervention methods for adult second language learning.

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