The Age Factor in Language Acquisition

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“She talks very well for her age, doesn’t she?”

Acquiring a language is a fascinating process that has always been intriguing for scholars and linguists over the history. Many scholars have successfully attempted to explain the complex process of second language acquisition (SLA). The popular schools of thought including the structuralist/behaviorist position, the nativist position, and the constructivist position introduced some remarkable attempts to analyze this mesmerizing phenomenon. In fact, these different positions aim to explain the nature of second language acquisition but do not necessarily stress on the connection between age and language development.

In many instances, we notice how children acquire their first and second languages effortlessly while many adults struggle to master a second language. Therefore, the younger the better, has always been the common concept to achieve a native like second language fluency. According to many studies, it is not the case of who is better because children and adults excel in different aspects of second language acquisition. In this research paper, I’m going to address the concept of the critical period hypothesis (CPH), as well as, closely analyze the different developmental stages for both children and adults in the field of language acquisition. I am, then, going to examine the two different positions in children and adults’ second language acquisition in terms of efficiency and performance.
The critical period hypothesis (CPH)

Why do children learn their native and second languages effortlessly? Is it their communicative approach of learning? Their brains’ plasticity? Or is it due to a certain stimuli found in their environment? In fact, all of the above factors are possible answers for this impressive phenomenon. In order to understand child and adults’ language acquisition, it’s important to learn about the age factor and the critical period hypothesis role in language acquisition. According to Lenneberg (1967), the founder of the critical period hypothesis, he theorized that the CPH starts at age two when the brain is still elastic and ends around the age of puberty and after the brain loses its plasticity to acquire a language naturally. Many studies have been done to test Lenneberg’s theory; therefore, a weaker and a stronger version of this theory have been proposed. (Figure -1)

(Figure -1) the critical period process

According to the book “Language Acquisition: The Age Factor,” the weaker version states that the acquisition of the language should start at the onset of the critical period; the sooner the acquisition happened the more efficient it is. Whereas the stronger version claims that language acquisition doesn’t continue naturally after the critical period even if it begins within the critical
period (33). Hence, there are other factors that are involved in language efficiency; therefore, it doesn’t only depend on how early we learn a language.

**The Beginning of CPH**

Lenneberg, in his book “Biological Foundation of Language (1967)”, has identified the beginning of CPH by observing deaf children. He found that children who became deaf before the age of two didn’t show any oral skills or awareness as opposed to deaf children who were exposed to some oral experience after the age of two. He proposed that language development depends on a certain level of physical maturation, hence, languages emerge between the age of two and three years old due to a certain “physical maturation and self-programmed maturation” (Lenneberg, 158). It’s important to mention that the physical maturation here is only an initial maturation that is necessary to acquire the basics of a language. According to the behaviorist, Skinner (1958), in the book Interactive Instruction and Feedback, the purpose of the self-programmed learning is to "manage human learning under controlled conditions" (7). And this is prevalent in children language acquisition process, in which the self-programmed learning delivers information in small bites, and it is self-paced by the child. It also provides immediate feedback both positive and negative by the child’s parent and his surroundings.

On the other hand, many studies have been made to refute Lenneberg’s argument which states that the CPH starts around the age of two. Some studies proposed that there is an evidence of infants’ awareness of the language and that language is being acquired at very early stages. Eimas (1971), Child Language: Acquisition and development, found that infants can discriminate between the phonological sounds by testing the sensitivity of the new born babies to sounds. He used a “sucking habituation technique” (111) to test the infant’s sensitivity to the
sound. The researcher noticed that when a certain sound was repeatedly played to an infant sucking on a blind nipple, his/her sucking rate decreased. However, any change in the sound would cause an increase in the sucking rate because the infant realized the disturbance in the sound. This experiment proposed that there is an innate ability to process the phonetics and the sounds that compose a language and that CPH begins as soon as the child is born.

**The End of the Critical Period Hypothesis**

Another controversial area of study in language acquisition is the end of the CPH. According to Lenneberg and his supporters, the critical period of language acquisition ends at the end of childhood and the beginning of adolescence. Studies have shown distinctive evidences to prove or reject the notion of the end of an effortless language acquisition. First, the neurological factor, which has been a vital evidence to the existence of a critical period to learn a language. There is no doubt that children and adults’ brains are different. Therefore, there is a consent that the child’s brain has more plasticity than the mature brain which greatly contributes to the language acquisition process.

A good example of the child’s brain plasticity is the quick recovery of the speech after a brain damage. This proposed that at an immature stage of the brain development, the human organisms are able to transfer the language functions from the damaged part in the brain to the healthy area in which the language can normally function. Whereas in adults, the brain is divided into two hemispheres, that are not equal in serving the language, since the left hemisphere usually carries the language function. Furthermore, any brain damage in the left hemisphere will usually result in a problematic speech that is very hard to treat (Singleton, Ryan - 40).

Subsequently, and since children are able to re-learn a language after a brain injury, language
learning before the maturation of the brain (before the age of ten) is easier and far more tangible than after the full development of the brain.

Another interesting evidence of the end of a critical period to acquire a language is the study of deaf children. Many studies indicate that the later acquisition of sign language usually result in a certain kind of a deficiency as opposed to the early acquisition. According to the book, Language, Cognition, and the Brain: Insights from Sign Language Research, the author stated that there are some long term benefits of learning American Sign Language (ASL) at an early age. She suggested that “the critical period hypothesis has a special importance for deaf population because if a deaf infant is born to hearing parent who doesn’t sign, then exposure to an accessible natural language will be delayed” (205). Deaf children who are exposed to ASL after the age of 12 may reflect a good lexical and semantic knowledge, but their morphological skills along with their syntax are usually impaired. Therefore, late acquisition in deaf children results in similar deficiencies that hearing children experience when learning a language at the end of the critical period.

Children’s language acquisition

In order to further identify the distinction between adults and children in SLA, it is essential to understand how the child’s speech emerges, and what are the developmental phases that children undergo while learning a language. David Crystal explained in his book, How Language Works, how children learn speech sounds. He stated that children acquire the basic pronunciation system by three, and by five, there is very little left to learn. Children have great auditory abilities, for instance; they have the ability to distinguish their mothers’ voice as infants. Between three months to four, they are able to realize the different tone of voice such as angry, happy and playful voices. By the first year, many babies understand some words and they begin
to use their mothers’ voices as stimuli for conversation and communication (80). They also start to understand the intonation of conversation, for example, questioning, greeting, joking, and so on. Children language development continues to reach more advanced levels such as learning the vowels and the consonants. By the second year, babies start to have variation of the words they are learning, such as pronouncing “blanket” as *bati* or *baki* (86).

Another interesting yet delightful aspect of the language development in children is the *fis* phenomenon. It has been reported by US psycholinguists when they observed a child referring to his inflated plastic fish as a *fis*. And when the adult asked the child: is this your *fis*? The child said no, and continued to reject the adult’s imitation until he was told, “that is your fish?” the child responded “yes, my *fis*” (87). It is an interesting observation because it proposed that children know more about the correct pronunciation in adults than their own. Moreover, at this early stage, children tend to hear and identify a certain input yet they produce something different due to their limited cognitive abilities. Unlike adults who don’t usually imitate or reduplicate the words in their second language acquisition, as babies enter their third year, they start to imitate and reduplicate the words they hear. The purpose of such tendencies is to simply play with the sounds, and practice them. Lastly, children learn the intonation by expressing feelings such as anger, happiness, and excitement while incorporating them in their speech. According to many studies, children continue to learn about intonation and formal patterns until they approach puberty.

**Language development after puberty**

Language development is an ongoing process because “it is difficult to identify any point in the lifespan when the process of language development is truly complete” (Singleton, Ryan-55). The semantic abilities continue to grow in adulthood along with the social speech. Using
appropriate forms of speech, good grammatical competence, and adopting polite manners in using the language are good examples of such developments. Also, during adolescence, teenagers start developing their own slang which has an important role in the progress of language acquisition. The acquisition of slang words helps teenagers to express certain thoughts and receive general acceptance amongst other teenagers. The writing competence is also a major part that keeps growing after puberty. Teenagers start producing more advanced sentences’ structures; their written skills usually continue to grow through college or even after depending on their practice of their writing abilities. Furthermore, during adulthood, adults continue to acquire advanced skills in their language control such as the ability to interview, present in a public speech, or teach in schools/universities. In fact, studies show that vocabulary tends to increase dramatically until the age of 40 or later. Generally, language development through adulthood has many tangible evidences, yet it is more of a personal choice. When adults are open to self-improvement; the overall effect is more likely to reflect positively on their language control as well.

**Young children are better learners’ position**

After this overview of language acquisition development, I’m going to discuss second language acquisition in children and adults in a systematic approach. Many linguists and scholars believe that the younger the better to learn any language, yet learning a second language after puberty will usually result in a limited competence. This popular notion of earlier L2 has been supported by many research and studies. For example, in case of immigration, many studies have shown that there is a strong relationship between the age of arrival to the host country and acquiring a native-like competence of its language. In Asher and Garcia’s experiment (1969), they have conducted a study on 71 Cuban immigrants to the United Sates whose age ranges from
5 to 19 years old and a group of 30 American born children. Their speech recordings have been evaluated by native speakers on a scale of 4 as the native-like accent and performance. The findings showed that none of the Cuban children seemed to have a native like accent; however, those who entered the States in a young age and settled there for the longest period of time reflected better pronunciation abilities than those who immigrated later. Such experiment strongly supports the critical period hypothesis and suggests that the age factor along with period of residency have an important role to achieve definite proficiency in SLA, that is, the younger and the longer children are exposed to the second language, the better language control they will acquire.

Another prevalent evidence of the strong connection between the early exposure to the second language and the native like performance is the issue of accent. Piper and Cansin’s (1988) presented a study on ESL learners in Canada who have arrived at the age of 6 to 26 years old with different lengths of residency. Their study consisted of interviewing the participants, having them read a short story, and repeat a personal narrative. After analyzing the data, the younger age group who were between 6 to 10 years old reflected better accents; nevertheless, unlike Asher and Garcia’s experiment, the length of residence in Canada didn’t contribute in promoting a native like accent since it usually depends on the early exposure to the second language. As a result, many studies suggested that the critical period to gain a native like accent ends at the age of six.

Researchers have found that if the L2 learners were exposed to the L2 by the age of 6, their accent will be judged as native. And if they have been exposed to the L2 by the age of 7-9, there are still strong chances that they will have a native-like accent; however, between the age of 9 and 11, the possibility of having a native like accent will drop to 50%. And after the age of 10,
the possibility is even more minimal (69). Subsequently, and as Scovel (1988) suggested, acquiring a native accent is an age-related issue. Older learners will usually outperform younger learners in the academic domain but younger learners will always have the privilege of having a native like accent due to their “neuromuscular basis”. He scientifically supported his argument by stating that “acquiring vocabulary and morphosyntax is fundamentally different from learning pronunciation because the former, unlike the later, does not have a physical reality” (84). In other words, unlike adults, the vocal muscles in children are underdeveloped and still very flexible to acquire new phonological sounds. Although children are better than adults in acquiring a native like accent, the fact that having a native like accent doesn’t necessary reflect full competence in the second language. Therefore, this leads me to my next point that adults have other advantages over children since they focus on competence rather than accent.

**Older learners are better learners’ position**

Studying older learners’ second language acquisition is usually done through studying their performance in formal instruction settings. Based on the above discussed studies, the age factor is related with accent and phonological abilities; yet studying L2 in adults is more concerned with the duration of the exposure and the rate of acquisition in return. There are many indications that proposed that older learners perform better and faster than children due to their mature cognitive abilities and analytical skills in processing the information. One interesting study that supports this stance has been done by Asher and Price (1979), they conducted an experiment on a group of students with an age of 10 and over. The purpose is to test their initial understanding of Russian, a target language that they have never been exposed to. The participants had some brief training by listening to some commands in Russian and observing a native Russian speaker responds to these commands. Then, the participants were tested on their initial understanding of
the language by responding to the commands they have heard. Also, they have been tested to respond to new commands that were very similar to what they have learned. The results showed that adults surpassed young learners dramatically in their linguistic understanding; hence, older learners proved that they are more likely to respond better than younger learners to formal instructions. Such experiment reflects the role of the advanced cognitive abilities in SLA that children, in the other hand, seem to lack; therefore, the process of acquiring a second language in children may be very time consuming comparing to adults.

In order to further explain the relationship between age, formal instruction, and second language acquisition, Cummins (1981) has devoted many of his work to distinguish between “the basic interpersonal communicative skills” which is referred to as BICS and “the cognitive/academic language proficiency” which is referred to as CALP. According to the book Encyclopedia of Language and Education: Bilingual Education, the distinction between the two concepts is important because the relationship between second language acquisition and performance involves many complexities. Cummins explained that CALP is related to the development of literacy skills in L1 and L2, whereas, BISC is concerned with L1 abilities such as accent, and sociolinguistic competence (Cummins, 177). In the case of age related differences in SLA, he argued that older learners who have developed literacy skills in their L1 (CALP) will usually acquire better and faster academic and cognitive L2 skills than younger learners. Although children are advantaged in regard to accent (BISC), their acquisition of the academic and cognitive L2 skills is a slow process due to their underdeveloped literacy skills (CALP). Cummins’s hypothesis does not propose that adults are more efficient than children in the process of second language acquisition or vice versa, but it provides a great evidence that different age groups excel in different aspects of second language acquisition.
Conclusion

In the light of the critical period hypothesis, there are many aspects that are involved in children and adults’ language acquisition. Children differ from adults cognitively and biologically; therefore, they undergo many developmental stages of language acquisition. They may lack the cognitive abilities to process the language faster and more attentively than adults, nevertheless, they are privileged to acquire a native like accent due to their flexible vocal muscles. Adults, on the other hand, may fail to acquire a native-like accent, but they are cognitively and biologically mature. Such maturity is perceived as an asset to excel academically and grow personally as successful second language learners.


