

Age Factor in Second Language Learning

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Abstract

This article is trying to find out whether age is a factor in the acquisition of second language or not and what should be the ideal age of the learners to start second language learning process. To discuss this matter some linguists refer to a particular period of human life which they think as the optimal period for learning a second language. They name this period as the ‘critical period’ and try to prove that beyond this period second language acquisition is almost impossible. However there are counter arguments and contradictory evidences from the studies of several other researchers. And these studies prove that second language acquisition is possible beyond this ‘critical period’. So let us try to reach a final conclusion into his matter with the findings of most recent empirical studies and scientific experiments in this field.

Keywords: Critical, Period, Hypothesis, Language, Acquisition, Age, Learner

The fact that most children seem to acquire second language (L2) more easily as well as to a greater extent of mastery than do adults, have lead many linguists to come to the conclusion that like every other biological function in life the function of language acquisition must occur at the right time, a time which has come to be known as the critical period. According to these linguists the optimal starting point for L2 learning should be the initial period or the critical period. However another group of L2 researchers question the proposition and refute it citing various evidences and arguments. This contradiction between two groups has generated a fierce debate and as a consequence it always remains an issue that of what should be the optimal starting point of L2 learning at school. Here we discuss all important arguments both for and against the ‘critical period hypothesis’ and thereby try to reach a conclusion.

Early as in 1925 Tomb (54) mentioned to the common experience of hearing English children in Bengal fluently speaking in English, Bengali, and Hindi while their seniors in the family could hardly speak Hindi to instruct the servants. Stengel (74) also put his observations on the age factor in L2 learning though from a Freudian point of view. A more scientific approach was made by Penfield and Roberts in the 1950s as they presented evidences suggesting that children are normally able to relearn language when injury or disease damages speech areas in the dominant language hemisphere (usually the left) whereas speech area recovery is much more

problematic in case of adults. Whereas in young children speech mechanism is often successfully transferred from the injured hemisphere to the healthier hemisphere such transfers do not seem to occur in the case of adults. The use this evidence as a basis for their conclusion that human brain becomes gradually stiff and rigid after the age of 9 and therefore those who are not introduced to L2 in early life do not achieve a good result. Penfield also emphasized on the 'unphysiological' nature of language learning beyond the childhood years.

The concept of critical period hypothesis was first developed in biological science as Lorenz noted how new born goslings became reversibly attached to the first moving object they perceived after hatching. However this happens for only a limited period of time and after that the goslings no longer behave like this. From this experiment the biologists conclude that this kind of behaviour or activity is the result of a particular stimulus in the goslings which works only in that limited period the 'critical period' and afterwards it is not acquired. Now Eric Lenneberg, who is generally known as the father of the 'critical period hypothesis' related to language acquisition, first linked this biological phenomenon to the language acquisition process. He describes the age from two to puberty in the human life as the 'critical period' for language acquisition. This period also coincides with the period of a lateralization process – the specialization of the dominant hemisphere of the brain for language functions. He adduced a wide range of evidence pointing to changes in the brain during this period and claimed that the lateralization process stops at puberty.

This theory receives a fresh fillip from Chomsky's contention that every infant has a flexible language acquisition device (LAD) (Chomsky 35) in brain. According to this theory this device becomes gradually rigid with the onset of puberty. This theory offers two versions - a strong one and a weak version. The strong version says that the children must acquire their L1 by puberty or they will never be able to acquire it over from subsequent exposure. The weak version is that the language learning will be more difficult and incomplete after puberty. The critical period hypothesis in respect of L1 acquisition is not convincingly supported by evidences, though Lenneberg cites examples of children deafened before the completion of second year and having no facilitations of oral skills in comparison with congenitally deaf children. From this evidence he infers that from the age of two 'critical period' begins.

In support of CPH two kinds of evidences usually are referred to by different linguists – the first is that of 'feral children' children who had grown up in an isolation from normal human behavior and society and who have been brought into contact with the human languages only around puberty. Most famous of this kind of children is Genie (Curtiss) who learnt the language of jungle as her L1 and after her rescue was given the training of a human language as L2. But she failed to acquire it. After five years' continuous training she only learnt two words. Some researchers see these cases as the evidence of failure in L1 acquisition. The second kind of evidence which is often suggested as the clearest proof for the existence of a critical period is the acquiring of sign language as their L1 by the deaf subjects who are deprived of language input for their early years. Long, Mayberry separately deals with deaf subjects who began learning American Sign Language as their L1. All of them however report that those subjects who begin their learning at puberty or afterwards have some problem in their acquisition. Newport and Supalla also support their view with their experiment and comment that this kind of subjects will not be able to reach the standard level of proficiency in L2 learning as there are always some problems in the area of syntax and morphology. These were chiefly the arguments and evidences

for the strong version of CPH. But few linguists provided proofs in support of the weaker version also.

Again as Chomsky changed the concept of LAD to UG (Universal Grammar) in language acquisition some linguists like Bley-Vorman, claim that post pubertal L2 learning has no access to UG principles and parameters and therefore the acquisition of L2 will be either incomplete or more difficult which means they often get fossilized. However, this proposition again points to another scope of L2 acquisition without UG.

Of late, CPH has been challenged from other points of view. More scientifically all these arguments are analyzed and empirical evidences are emphasized over the assumptions and theories. In this part of our discussion we shall examine the already discussed evidences more closely and try to see if there can be any other possible explanations of the problems which is often assumed as the result of beginning learning L2 after the 'critical period'?

Firstly if we consider the argument of Tomb and Stengel it becomes quite clear that their theory is based on their observations on the children around them. They assume from their observations that there may be the age factor in the case of language acquisition.

Secondly, Penfield also was not able to present any direct correlation between language acquisition process and transfer of active language hemisphere from one side to another because of injury or disease. Again if we analyze Lenneberg's argument the very first thing we should note that he presents a double version of CPH which has dubious status and thereby becomes unscientific. Besides, he displays ample evidence in support of the fact that brain becomes mature in puberty but how this maturational process is linked with the subsequent decline in language acquisition capability is quite unclear. Moreover his claim that lateralization process ends at puberty has been significantly undermined by later studies of Krashen. These studies reinterpret the data presented by him and declare that the process completes in early childhood. Another evidence referred by him the case of deafened children before the age of two is also negated by his own language acquisition time table in which he notes that the development between 4 to 20 months is from 'babbling to words'. Researches regarding the acquisition of phonology and conceptual and lexical developments indicate that comprehension of linguistically mediated communicative functions is established early in the second half of the child's first year. So as Singleton observes, we can say that Lenneberg's own arguments and evidences are quite vague and anecdotal in nature and bears interpretation other than he proposes. Now if we turn our attention to the evidence of feral children we can find that the problem with such instances is that the evidence is extremely difficult to interpret has there is always a deficiency of information about the child - the precise amount of exposure to language, the extent of the trauma induced by his experience etc. Lenneberg himself is skeptical about these evidences and comments 'life in dark closets, wolves' dens, forests or sadistic parents is not conducive to good health and normal development' (Lenneberg 57). So these evidences are not quite dependable as we see. Studies in the evidence of the deaf learners who learnt American Sign Language as their first language lead to two conclusions. The first is that the subjects do not completely fail to acquire language even when they begin after the 'critical period'. The second is that as Peterson and Siegel observes deprivation of language input during the face in a child life when cognitive development is at its most intense has general psychological/ cognitive effects and it maybe these general effects that are reflected in later language development rather than effects relating specifically to a critical period for language. The study of the immigrants which

reveals that younger ones are better learners and proficient speakers is directly refuted by recent research like Birdsong. All of these researchers' most adult subjects learn and speak L2 quite efficiently like other age group learners. After reviewing the results of all these empirical researches it's now time to turn to the results of most recent and technologically advanced researches best on the study of the language area in the human brain with MRI.

KHS Kim, NR Relkin, KM Lee and J Hirsch in Memorial Sloan-Kettering Hospital's functional MRI laboratory made an experiment using MRI machines and revealed their observation about the function of different brain areas in acquiring L1 and L2. They examined 12 bilingual people from New York who represented 10 different languages in this test. Half of the subjects learnt two languages in infancy. The other half begins to learn the second language around the age of 11 and had acquired fluency by 19. At the time of the test their brain activities were checked by the MRI machines. It was seen that all of the subjects had only one Wernick's area that helps to understand the meaning of words and language, in their brain. But in the brains of those subjects who learnt second language later, the researchers found two Broca's areas for two different languages. Broca's area usually controls the speech and some grammatical aspects. They observed that both the Broca's areas are of same size and only one area is activated at a time for each language. With this evidence they concluded that age is an important factor in second language learning and also that it would be easier for one to acquire second language at infancy. However what is interesting to note here is that those who had two Broca's areas and who had begun to learn L2 at adolescence or after that the researchers themselves informed us were 'fluent' or 'proficient' with their L2. So it may be harder but not impossible for one to begin to learn a second language in adolescence or after and achieve proficiency in that language. This experiment of course provides significant proof to the fact that after a certain age, the acquisition process of L1 and L2 becomes different in the brain. If second Language learning begins in infancy, the acquisition process of L1 and L2 involves the same mechanism that is adopted by the brain in case of L1. Therefore it 'may' be easier for a learner to acquire L2 in infancy.

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