

# The Significance of Age in Second Language Learning

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**Abstract:** What the role of age plays in language acquisition and learning has been studied over the period of 60 years. A great number of contributions to this field have been made by numerous specialists and researchers. Lenneberg in 1967 proposed the Critical Period Hypothesis (CPH), which set off a furious debate in the field of language learning. This article will introduce the CPH and its development firstly and then evaluate some evidence supporting or against CPH.

**Keywords:** The Significance; Second Language; Learning

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## 1. CPH and its Development

Penfield and Roberts (1959) firstly used the term “critical period” into the study on language acquisition and put forward the concept “the optimum age”. They pointed out that the best time to acquire the language is before the age of ten when the brain maintains plasticity. After people move into the puberty, the plasticity of brains begin to disappear. Lenneberg (1967) developed this view and proposed the concept Critical Period Hypothesis in his book *Biological foundations of language*. He hold the view that first language acquisition only occurs in critical periods from the age of two to puberty. Because people’s brains begin lateralization at age of two and complete it by puberty. During this period, the whole brain is involved in the language acquisition. After the puberty, only left hemisphere in brain is responsible for language acquisition. Therefore, people hardly achieve mastery in the first language if they learn it after puberty. However, based on the clinical and testing data, Krashen (1973) later proved that the lateralization is completed by the age of five or even earlier, so it means the development of lateralization may be not related to Lenneberg’s concept - Critical period, and Lenneberg’s claim needs more evidence to prove.

At beginning, the study on Critical Period Hypothesis was popular in the first language acquisition. However, the theory was extended to the second language learning by some scholars who were interested in the relationship between age and second language acquisition. Most of studies in this field suggested that critical period also exists in the second language learning. Johnson and Newport (1989) found the ability to learning second language begins to decrease after age of 6. This findings about the optimum age was different from what Lenneberg proposed. Actually, the optimum age for learning is vague, because many scholars had different views about the age period, but they hold a same idea that the younger learner have more superiority in learning second language than old learners and people after a certain age impossibly achieve the near-native language level. Next I will analyze the significance of age on second language learning by evaluating evidence for the CPH

One influential study on the relationship between age of starting learning English and speakers’ pronunciation was carried out by Oyama(1976). He chose 60 Italian-born males who immigrated to America as subjects in his study. As immigrants, they lived in the immersion environment, having more access to English. All of subjects in this study were male, which also helped exclude the effect of sex difference. These people all lived in America for several years (about 5-8 years), but their ages at arrival were different, ranging from 6 years old to 20 years old. The measure was to test their pronunciation by their two taped speech sample. The samples with equal length were judged by judges. They judged these samples with different marks according to the degree of the accent from no foreign accent to strong foreign accent. Through the analysis of the result, Oyama drawn the conclusion that the earlier people immigrated to America, the better accent of English they have (native like). Those who moved to America at older age spoken English with stronger accent which was influenced by their first language. This study seems to support the idea that younger learner are superior to the older learner (adult) in learning second language in the accent. However, Language, as a tool to communicate with others in the society, is not only related to

the pronunciation. Other aspects should be taken into consideration such as the accuracy ( grammar), fluency and complexity (various sentence structure). This finding in this study can only indicate that younger learner have more advantages to gain the native-like accent than older learners. In fact, the number of subjects are not large in this research and it can not help prove that adult or older learner impossibly achieve language level with non- foreign accent.

Another evidence supporting CPH was from Patkowski (1980). He studied the influence of age on many aspects of second language acquisition, especially syntax. He observed 67 immigrants from different first language background in America and tested their spoken English level. These subjects began to learn English at different ages, but all of them have lived in America for at least 5 years, which was to ensure that they were exposed to the immersion environment and had enough time to acquire this language. He interviewed each subject and recorded the whole conversation with tape recorder. In order to avoid the possibility that the test results might be affected by their accent, the records were not judged by rater directly. Patkowski chose five-minute sample from each recorded interview and cut contents which might reveal these subjects' cultural background. All of rater who would judge these sample were native speakers who accepted professional training. They were asked to grade the subjects' spoken English level from 0 to 5. The findings of this study were very interesting. Thirty-two out of thirty-three subjects who started to learn English before the age of fifteen achieved 4+ or 5, which suggested that if people begin to learn second language before puberty, they are more likely to achieve native-like level. In contrast, those who began to learn English after the age of 15 did not perform well in the test. The performances of this group were various. The overall number of subjects in this group was 34. Twelve subjects got 3+, six subjects were rated 3 and nine were rated 4.

Accord to the analysis of the data from this study, it seems that age does matter with ( or even determine) the achievement of the second language learning, which mostly matches the CPH in the second language acquisition. On the whole, people who touch English by puberty have better achievement than those after puberty. However, in the second group, although there is only one person getting 5, it also indicates that older people are likely to achieve native-like second language level. In addition, for this study, there are some limitations in its' control variables. For example, these subjects were from different country, so, their first language were different. Different language may have different influence on second language learning because some languages are more close to English system while some have larger gap with English. Meanwhile, their attitude and motivation to English were not taken into account. Some subjects' attitude might be not as positive as others, which would also result in their different efforts to second language learning and different achievement in second language learning .

## **2. Evaluate and Analyze the Evidence against CPH**

The study carried out by Snow and Hoefnagel-Hohle(1978) showed different findings against CHP. In their study, English speakers who learned Dutch as second language from three-year-old children to adults were chosen as subjects .Many tasks were used to measure their different aspects of the language, including pronunciation, syntax, telling a story, and so on. They were tested three times, within first 6 month in Holland, at about eighth month in Holland and at about twelfth month respectively. By comparing the statistic data from the three tests, Snow and Hoefnagel-Hohle(1978) found that at the beginning, adolescents got highest scores on all of the task except pronunciation. Adults were placed second to adolescents and children group did worst at this test. In other words, adolescents and adults were better second language learner compared with children at the initial stage of learning. In the end of the year, according to the result of the test, the children moved ahead of the adults in the over-all scores, placed to second, but the adolescents still outperformed the other two groups overall.

However, some tasks in this study for these subjects were not reasonable enough. There were still some shortcomings in these tasks. For example, the pronunciation task asked subjects to pronounce 80 words with pictures immediately after finishing listening to the pronunciation of these words from native speakers. In fact, the people in this test ranged from 3-year-old children to adult. The memory of three- year-old children was certainly not as good as adults' and adolescents'. The quantity of 80 words was too large for them to memorize in the short time. As a result, children undoubtedly did badly in this task. In addition, the syntax task were designed to test subjects' lexis and grammar skill by asking them to translate

sentences. Unlike the adults and adolescents, young children do not have a good cognitive ability. They may even not understand the sentence in their first language. Let alone translate it into Dutch

Although some test measures in this study is not thorough, it also can be, to some degree, regarded as an evidence refuting the idea *the younger, the better*, because no matter in the short run or in the long run, adolescents did better than children in the test(except pronunciation).

Another special example that refuted CPH in second language learning was about Julie's experience. (Ioup et al, 1994). Julie, a British woman, did not have formal education in Arabic before go to the Cairo. She moved to Cairo at the age of 2, then married her husband, an Egyptian. After her husband was asked to serve in the army. she had to live with his relatives who could not speak English at all for 45 days. Because they could not understand each other's language, she mostly used body language to express herself and guess others' meaning by the context. This period was her first time to contact with Arabic. During this period, she picked up a few utterances which were widely used in the daily life. After her husband came back from military service, she had more chance to learn Arabic. Three years later, Arabic became home language for her. When she was chosen as a subject in the study, she had been lived in Cairo for 26 years. Ioup (1994) wanted to test her level of Arabic from three aspect: speech productions, ability to discriminate accents, and knowledge of syntactic rules. Some native speakers and a proficient L2 speaker, Laura who learned Arabic under the formal instruction for many years were also selected to join the test for comparison. In the first task, through evaluating their speeches, most judges (62%) regarded Julie and Laura as native speakers. Only 2 judges rated Julie as non-native speaker due to her occasional mistakes in pronouncing certain consonants or word. In the accent identification task, Julie even did better than native speakers. Her performance revealed her excellent perceptive abilities, which is a prerequisite to accent-free second language. In the grammatical judgement task, Julie also performed well, comparable to native speakers although she failed to distinguish some complex sentences ( these mistakes even usually happen to native speakers).

It appeared that Julie achieved the native-like level of Arabic according to the results of the three tests. To some degree, Julie's case could be a counterexample to the critical period hypothesis. Looking back Julie was hard-working ( keep writing down what she observed about language) in Arabic and laid importance of the grammar structure. She took each feedback from others seriously. On the basis of analysis from Ioup et al (1994), It can be known that she had talents in language. The case suggests that even older learners without formal instruction also probably have excellent command of second language ( native-like level).

## Conclusion

From analysis of the evidences for and against the CPH, It can be concluded that at initial stage of learning second language, older learners (on the whole) may learn more quickly and effectively, especially in syntax, such as in Snow and Hoefnagel-Hohle's study, because older learners have better learning capacities and real-world knowledge (Saville-Troike, 2006). However, second language learning is a long and accumulative process. If we regard ultimate achievement in second language as evaluative criteria, younger learners may have more advantages, especially in pronunciation, such as in Oyama's study and in Patkowski's study because they have better brain plasticity and fewer inhibitions (Saville-Troike, 2006). Therefore, age is an important factor to influence the success in second language learning. However, it does not mean that older people can never achieve NS standard. Although the case of adult acquisition to NS standard is rare, it is also possible, such as Julie's case, because there are more significant factors than age, such as positive attitude to learning, talent in language, effort and good learning strategies. If learners are capable of making good using of some of these factors, negative effect from age, to some degree, can be reduced or eliminated. All in all, age can influence the achievement in second language, but not determine the achievement in second language learning. We can neither ignore the significance of the age in SLL or exaggerate it. If possible, learner had better start to learn second language earlier.

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