Can Adults Attain a Native-Like Accent in Their Second Language?

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Second Language Acquisition (SLA) is influenced by many different factors. This paper attempts to discuss the age factor in SLA, particularly explores the learners' acquisition of accent. The author firstly introduces the topic and reviews the literature on Critical Period Hypothesis (CPH). Then, the optimal age to attain the native-like accent is discussed. Finally, the author describes some other elements that influence the acquisition of accent and draws a natural conclusion that the topic in this paper needs more profound research.

Keywords: SLA, age factor, CPH, optimal age

Introduction

The study of the Second Language Acquisition (SLA) has drawn more and more attention since the 1960s. One of the major conundrums in the SLA is the question of differential success. The factors attributed to the differential success are various. Age is an unchangeable factor among others that affect the second language (L2) acquisition. There is a prevailing belief that children are better second language learners. It is based on many people's experiences that children who immigrate to a foreign environment are able to learn the language more easily and quickly than their parents. It seems that children can achieve a native-like level without much effort, while adults study hard and diligently for years only to find that the results are unsatisfactory. It seems that children are intrinsically better learners. But this assumption has not been confirmed by all researchers in this field. On the contrary, a lot of evidences prove that the older children grow the more effectively when they learn and that teenagers are probably the best learners (Ellis, 1994). The only exception might be accent, which is learned more easily by younger children. But there are still some evidences to support the fact that adults can also learn native-like pronunciation. Can adults attain a native-like accent in their L2 on earth? It is necessary to review the relevant researches before answering the question.

Studies of Age Influence for SLA

In the past few decades, the comparisons among child, adolescent, and adult learners have been made by many researchers, and the different findings as well as explanations have been reported. In the investigation of the controversy over the relationship between L2 acquisition and age, the proponents and the opponents almost constituted 50 percent respectively. And the critical period hypothesis and optimal age to attain a native-like

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accent are the hot-debated topics.

An Introduction of Critical Period Hypothesis

There seems to be widespread agreement among L2 researchers that adults lose some important aspects of speech-learning ability that children still possess. This belief has found expression in what will be referred to here as the “Critical Period Hypothesis”.

The term critical period for language acquisition refers to a period of time when learning a language is relatively easy and typically meets with a high degree of success. The idea of a critical period was first introduced by Penfield and Roberts (1959), who argued that language acquisition was most efficient before age nine, when “the human brain becomes...stiff and rigid” (p. 236). Later, Lenneberg (1967) developed it. In *Biological Foundations of Language*, Lenneberg suggested that natural language acquisition “by mere exposure” could only take place during a critical period, lasting from about age two to puberty. Before two, language acquisition was impossible due to maturational factors, while natural acquisition of language after puberty was blocked by a loss of “cerebral plasticity” supposedly caused by the completion of the development of cerebral dominance, or lateralization of the language function. It was this biologically based critical period, Lenneberg suggested, that was responsible for the fact that “automatic acquisition from mere exposure to a given language seems to disappear after this age (puberty)” and “foreign accents cannot be overcome easily after puberty” (Lenneberg, 1967, p. 176).

Supports most frequently quoted for the CPH were the case studies of the children who had been isolated from language and who tried to acquire the language before and after their critical period. Studies of teaching a language were reported in the following three cases.

The first case was a deaf mute child named Isabelle, who was found at the age of six and half. She spent alone in a darkened room before being found, but she succeeded in her language learning. It was reasonable to consider that she was able to acquire her language because she started learning before the critical period came to an end. The second case was Genie, who was found at the age of about 14 (Curtiss, Fromkin, Krashen, Rigler, & Rigler, 1974). Since she started learning a language after she was already pubescent, her critical period had passed already. Genie had to take quite a long time to acquire a language. The third case was Chelsea, who started to learn language in her early thirties (Curtiss, 1980). She showed poor grammatical ability like Genie, but her vocabulary was better. All these cases of children reared in isolated environments reveal the difficulties of learning a language after the critical period. Some supportive studies of CPH in SLA will be cited in the following. Johnson and Newport’s findings (1989) have been accepted as the best evidence in support of the critical period in L2 learning. In their study of critical period effects in learning a second language, Johnson and Newport conceded that there did indeed exist a critical period for second language learning. Johnson and Newport believed that after the age of six, the ability to learn a second language began to decline. Johnson and Newport’s study involved 46 Chinese and Korean speakers learning English as a second language. In this study, respondents were tested not only on syntax, but also on morphology, and were asked to judge the grammaticality of many sentences. The results showed that “subjects who began acquiring English in the United States at an earlier age obtained higher scores on the test than those that began later” (Johnson & Newport, 1989, p. 77). The results also showed a correlation between the age of acquisition and the variance in the ultimate performance in adults.

Long (1990) drew several conclusions that were relevant to the topic: (1) Both the initial rate of acquisition and the ultimate level of attainment depended in part on the age at which learning began. (2) There were sensitive periods governing both first and second language development, during which both the acquisition of different linguistic domains were successful and after which it was incomplete. (3) The age-related loss of ability was cumulative, not a one-time event. (4) Deterioration in some individuals began as early as six. Long felt that the decline of Linguistic ability while learning a second language was related not to cognitive abilities but to an age related device found to be before puberty.

Patkowsky (1980) suggested that a critical period for second language learning did indeed exist. His study meant to find out the likelihood of a critical period for learning a second language. Patkowsky found that learners under the age of 15 achieved higher syntactic proficiency than those who were over the age of 15 at the onset of exposure. The results of his study showed that of those who were exposed to English pre-puberty (participants up to the age of 15), all, (except one) achieved ratings of four through five whereas those in the post-puberty group received a wider range of scores. This study was a departure from earlier studies since the most obvious measure of proficiency had previously been in the linguistic domain of phonology. Patkowsky posited that among all the factors he examined in his study, age was the factor that had the most significant impact of success in learning a second language. His findings were fully consistent with the Critical Period Hypothesis.

Through a series of experiments in various areas of brain, Weber-Fox and Neville (1999) found late learning bilinguals displayed slower linguistic processing than early-learning bilinguals, and that language-related neural systems of later learners were different in locus and function from those of early learners, which were also viewed as being consistent with a Lenneberg-type conception of the CPH.

As medical science has progressed, some points in Lenneberg (1967) were under criticism. Firstly, his claim that the CPH could be supported by the study of Down's syndrome cases was attacked. According to his argument, the development of children with Down's syndrome was so slow that they passed their critical period for language learning. However, a recent survey disputed his claim because children with Down's syndrome had a built-in endpoint to their ability. Secondly, the theory of brain's lateralization at the age of two, with the critical period set by Lenneberg (1967), was also criticized. He claimed that children before their critical period were less severely impaired by brain damage. However, Krashen (1973) reexamined the data used in Lenneberg (1967) and found all the cases of complete recover from aphasia were under the age of five. Surprisingly, the number of cases of recovery at the age of more than five or over was nearly the same number as the adults.

Snow (1978) clearly expressed her points of view that there was no critical period for second-language learning and there was no biologically determined constraint on language capacity at a particular age. Krashen (1973) firmly opposed the critical period hypothesis. His research reports claimed to be counter to the hypothesis that there was a critical period for language acquisition. What is more, Swain (1981) found that late immersion learners had many better results than early immersion learners. Fledge (1999) proposed that nonnative-like accents did not result from a loss of ability to pronounce; rather, they were an indirect consequence of the state of development of the L1 (the first language) phonetic-phonological system at the time L2 learning was begun. Bongaerts (1997) also brought disconfirming evidence in the form of late learners who were able to attain native-like accents.

Optimal Age to Attain a Native-Like Accent

Whatever the researchers approve or disapprove of the existence of critical period hypothesis, there are differences between child and adult L2 learners. And around the differences several questions occur. Is the younger learner definitely better than the older one? If it is true, then what is the optimal age for L2 learning? Does it mean that an adult L2 learner cannot acquire a native-like accent in their second language even with great efforts? Where do the differences exist and to what extent the differences affect L2 acquisition process? On the question of an optimal age for L2 learning, several views emerge at the same time.

Although people can learn languages at any age stage according to the case mentioned above, the Brain Plasticity Theory and Critical Period Hypothesis imply that children who learn an L2 before adolescence are more likely to attain native-like accent than older learners. But there are also other people who hold the belief that too early an acquisition of a foreign language would result in neither good L2 nor good L1. Recently, a number of researchers found that children had an innate ability to acquire the rules of any language, and that this ability diminished by adulthood (Johnson & Newport, 1989). Some researchers, however, argued that although young children acquired accent easily, they were not particularly efficient learners of vocabulary or other aspects of language structure (Genesee, 1987).

The first issue about biologically based optimal age for language learning was provided by the neurologists Penfield and Roberts (Stern, 1983). They argued that the child's greater ability to learn a language could be explained by the greater plasticity of its brains, because the brain plasticity was found to decrease with age. In their conclusion, Penfield and Roberts derived the following suggestion for foreign language teaching from these observations. In accordance with the demands of brain physiology, the optimal time to begin second language learning is between the ages of four and ten.

Further theoretical support for early language learning could be derived from the natives' view of first language acquisition, which was strongly advocated by some researchers, such as Chomsky, Lenneberg, McNeill, and others. They regarded the years before puberty as a biologically active period of language development. In fact, accent is an area where the researchers hold the assumption of the younger-is-better. Researcher Oyama (1976) has found that the earlier a learner begins a second language, the more native-like the accent he or she develops. In the study of 71 Cuban immigrants, Asher and Garcia (1969) claimed that the highest possibility of a near-native English accent occurs when the child comes to the United States from one to six years of age and lives in this country from five to eight years. It is a finding of immigrants' case, so whether it holds for non-immigrant learners remains a problem. After all, in this case, the Cuban immigrants' L2 learning conditions are somewhat close to the bilingual children's learning environments. Aphasic can be studied in order to discover how the brain processes language. The damage partially to brain can usually make people lose the ability to use and understand language totally. Lenneberg (1967) noted that around the age of puberty, the persistent aphasic symptoms resulting from left-hemisphere injury was about the same age that "foreign accents" became probable in second language acquisition. Researchers hold different viewpoints in when this period begins and comes to an end. A grammaticality testing study made by Johnson and Newport (1989) suggested that the period ended at about age of 15. This grammatical judgment was tested in a large group of subjects who had immigrated to the United States at different ages. They tested around a decade after their arrival, and claimed that a clear decline in abilities started in people who arrived as early as the age of five. L2 learners' early start makes a long sequence of

instruction leading to potential communicative proficiency possible and enables children to view second language learning and related cultural insights as normal and integral. In this case, the results showed that optimal period was from birth to five, the opportunity is closed after 15.

Against the various claims that early childhood has special advantages for second language learning, others have advocated an opposing viewpoint. They argue that greater cognitive maturity and greater learning experience on the part of the older language learners are assets. Lenneberg (1967) claimed the superiority of younger learners was that children's brains were more flexible. Current research challenges this biological suggestion, arguing that different rates of L2 acquisition may reflect psychological and social factors that affect child learners (Newport, 1990). Research comparing children to adults has consistently demonstrated that adolescents and adults perform better than young children under controlled conditions (Snow & Hoefnagel-Hoehle, 1978). One exception is accent, although some studies show better results for older learners.

It can be confirmed from the above that each stage of mankind's development may have certain advantages and disadvantages for L2 acquisition. The problems about whether the critical period hypothesis is acceptable or not and when is the optimal age to attain a native-like accent are far from being solved.

Other Influencing Factors for SLA

In addition to the influence of age, what cannot be neglected is that adults to attain native-like accent in their L2 are also restricted by other factors. That is why different adults learn language at different rate.

External Factors: Linguistic Environment

To date, the claims made concerning the role of the linguistic environment in L2 are four in number. The first area is the effect of deviant input. The other three are conversation, input modification, and comprehensible input (Diane & Michael, 1991).

Individual Difference

After Penfield and Roberts, the two cooperators, and Lenneberg brought neurological and physiological theories into linguistics, a lot of researchers started to shift their studies from the process of teaching to the process of learning. Learner-focus study took more learners' individual differences into consideration, such interior factors as motivation, aptitude, and learning strategies. The same is true of adult learners as individuals in L2.

Motivation. Motivation in L2 learning has mainly been used to refer to the long-term fairly stable attitudes in the students' minds. Several types of favorable motivation have been talked about: intrinsic and extrinsic motivation; and also integrative and instrumental motivation which was introduced by Gardner and Lambert in a series of books and papers. A learner is said to be integratively motivated when the learner wishes to identify with another ethnolinguistic group. By way of contrasting to integrative motivation, instrumental motivation means that the learner is motivated to learn an L2 for utilitarian purposes, such as furthering a career, improving social status, or educational requirement.

Aptitude. Given that their ages, motivations, and so on are the same, why are there such difference among L2 learners? The effect of aptitude should not be denied. As Krashen (1981a) suggested, aptitude is important for "formal" situations such as classroom. Both the high-quality language instruction compensation for the lack of

apptitude and particular methodological approaches employed to match with the aptitude profiles can prove the role of aptitude.

Learning strategies. People who are good at language may tackle L2 learning in different ways from those who are less good or they may behave in the same way but more efficiently. One interesting theme is the good language learner (GLL) strategies. Naiman, Frohlich, Stern, and Todesco (1978) tried to see what people who were known to be good at learning languages had in common and found several broad strategies. Extensive research that went much deeper into learning strategies had been carried out by O'Malley and Chamot (1990) within an overall model of L2 learning on cognitive psychology.

Conclusion

To sum up, whether adults can attain a native-like accent in their L2 or not, the answer to the question is uncertain because of the controversy about the age influence on the L2, that is, the two assumptions about the critical period hypothesis and optimal age to attain a native-like accent fail to be confirmed by all researchers. Furthermore, other factors such as learning environment, motivation, aptitude, and learning strategy, also contribute to differential acquisitions among adults as individuals. However, we cannot stop here. As Seliger (1984) contends,

The more variables we identify, the more we attempt to explain the re-combinations of these variables through the wonders of the computer and multivariate analysis... While many characteristics have been related correlationally to language achievement, we have no mechanism for deciding which of the phenomena described or reported to be carried out by the learner are in fact those that lead to language acquisition. (p. 37)

We will continue to add more research achievements to explore the question.

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