

Evaluating the Role of Age in Language Acquisition

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Abstract:

The importance of age in language learning has been debated for a long time. The general assumption is that age plays a positive role in facilitating language learning and attaining native-like competence. This paper is concerned mainly with investigating the role which age plays in mastering syntax/morphology and phonology in the process of language learning. It also pays some attention to the effects of age on the route or the way and the rate or the amount of learning. Studies carried out earlier on the effects of age are reviewed in this paper. It reviews how age affects learning and what aspects of language it affects focusing on syntax/ morphology and phonology. It is concluded that age mainly affects phonology. That is, starting to learn a language early leads to native-like pronunciation. However, it is found that an early start is not an advantage for learning syntax and morphology. It is recommended that language be introduced early in curriculums so learners make more benefit from early start to master the target language.

Keywords: Age, critical period, syntax/ morphology, phonology.

1. Introduction:

Age is a very important factor that influences both first and second language acquisition. It has always had an atmosphere of debate and controversy around how it can affect the way and amount of language learning and/ or acquisition. As Lightbown and Spada (2000) put it “the relationship between a learner's age and his or her potential for success in second language acquisition is the subject of much lively debate” (p.60).

It has been said that there is a certain point of age after which people cannot attain perfect mastery of a first or second language. This period is referred to as the 'critical period'. Munoz (2006) illustrates that this hypothesis was first introduced by the Canadian brain surgeons Penfield and Roberts in 1959. Munoz (2006) adds that “Lenneberg (1967) suggests that the lower bound of the critical period is situated at age 2 [whereas] the higher bound of the critical period for Lenneberg is situated at puberty” (p.6). Following this, there are two versions of the critical period hypothesis. The weak version proposes that after the age of puberty, language learner may achieve native-like mastery of a language, whereas the strong version states that after puberty acquisition becomes very difficult and achieving native-like level in a language is impossible (Munoz, 2006, p.129).

In this paper it is hypothesized that when learners start learning a language, either first or second, as children their learning will be more efficient spontaneous and easier. However, as learners become older they will probably face more difficulties in learning and they will not reach native-like mastery of that language. This paper tries to demonstrate whether the younger a language learner is the better he/she will be in learning a language and in what aspects of a language by surveying some studies about the role of age in learning a language. However, it will not be possible to look at all language aspects in this paper, but focus will be only on phonology and syntax.

1.1 Learning Vs. Acquisition:

Before proceeding to investigating the role of age in FLA (First Language Acquisition) and SLA (Second Language Acquisition), defining the terms acquisition and learning and drawing distinction between them is a prerequisite. According to Ellis (1985, p.6), “The term 'acquisition' is used to refer to picking up a second language through exposure, whereas the term 'learning' is used to refer to the conscious study of a second language.” Therefore, acquisition refers to the spontaneous grasp of a language, normally the first language. Learning, however, implies systematic guidance and tutoring in how to use a language, usually a second language. In the same

vein, Lightbown and Spada (2000) draw attention to the distinction between these two processes by suggesting that language is acquired through exposure to second language as “children pick up their first language”, unconscious of language form. Learning, on the other hand, takes place consciously through study (p. 38).

In the next section, the effects of age on language learning will be considered starting with a review of the critical period and its implications for learning languages.

1.2 Critical Period:

Critical period refers to “The time between early childhood and puberty during which a child can acquire language easily, swiftly, and without external intervention. After this period, the acquisition of the grammar is difficult and, for some individuals, never fully achieved” (Fromkin, Rodman and Hyams; 2003, p.579). However, there is debate about the range of critical age among scientists. For example, Cook (2001, p.132) states that the critical period falls between “the age of two years and the early teens”. He (1985, p.107) puts it more clearly by saying that:

The critical period hypothesis states that there is a period when language acquisition takes place naturally and effortlessly. Penfield and Roberts (1959) argued that the optimum age for language acquisition falls within the first ten years of life. During this period the brain retains plasticity, but with the onset of puberty this plasticity begins to disappear.

As mentioned earlier in this paper, there are two versions of the critical period, namely a strong version and a weak version. The weak version suggests that language learning after puberty can be successful, at least partially. However, the strong version states that successful learning after puberty is very improbable and learners learning a language after this age are very unlikely to develop appropriate competence in any language. According to Lightbown and Spada, the strong version states that if a language is not learned by puberty the biological endowment which permits

successful language acquisition will not be available. Thus the learner will have to use general learning mechanisms which are not designed for language acquisition and thus not as successful. The weak version is that, even though the same learning mechanisms are involved, second language learning will be more difficult and incomplete after puberty because most learners have neither the time nor the motivation to reach the high level of mastery which a child reaches (2000, p. 173).

Age, therefore, can have great influence on both first and second language acquisition. The popular belief is that children are far better in learning languages than adults. Cook (1995) asserts this view by stating that “All children magically acquire their L1 to a high level of knowledge after a few years. Many L2 learners achieve only a minimal L2 competence after long years of struggle and effort” (p.52). Children start producing their first sounds in early stages when they are hungry or feel annoyed. These sounds they produce are merely “involuntary crying”. This ability to produce and distinguish simple sounds develops remarkably in the early years of life. Around the age of two, children start producing words. They also start combining words to make simple sentences which often lack articles, prepositions and auxiliary verbs. Such sentences are called telegraphic sentences. By the age of four or so, children start to show mastery of rules of the language spoken to them. They can ask questions, tell short stories and so on. What is remarkable at this stage of children life is that they demonstrate knowledge of rules for forming past tense and plural forms (Lightbown and Spada, 2000, pp.1,2).

In relation to the issue of age in language acquisition, there are two main theories that account for language acquisition and need to be reviewed here. The first theory for language acquisition has been the behaviourist theory. This theory states that learning any language is similar to learning any other habit, i.e. it is acquired through imitation, reinforcement for good learning or punishment for wrong learning. For example, a child may imitate his father after hearing the word 'duck', and receives positive reinforcement in the form of a smile or praise, etc. This reinforcement is lacked if the child commits an error. Absence of reinforcement or even punishment leads to

neglecting the error which will vanish over time. The type of reinforcement, however, differs according to the age of a child. What should be met with enforcement for a two year old child will not be met with the same welcome for a four year old one (Fasold and Conor-Lenton, 2006).

The behaviourist theory received harsh attack by the nativist theory which was introduced by Noam Chomsky in 1959. According to this theory, “children are biologically programmed for language and that language develops in the child in just the same way that other biological functions develop” (Lightbown and Spada 2000, p.15). They add that children need not be taught how to walk; a normal child learns to walk if he is not handicapped or inhibited from walking. Language acquisition happens in the same way. Provided that children are exposed to language, they will learn to speak and their biological endowment will do the rest.

The behaviourist theory could not justify how children can acquire a language. One criticism against it was the ability of children to produce and understand novel sentences they have never heard or seen before. This leads to the assumption that they process language in their minds and that there is something more complicated and intrinsic than imitation. Innatist theory, on the other hand, admits the role of exposure to language but merely as a trigger that makes the child start processing language in mind. This is why language acquisition after a certain age, known as the critical period, is said to be unlikely or even impossible as discussed earlier.

According to the critical period, when learners are introduced to a language as adults they usually confront great difficulty. They do not gain complete competence in that language. It sometimes goes further that in its strong version, the critical period states that learners introduced to a language as adults cannot learn it all. Lightbown and Spada (2000) state that, “as in first language acquisition, there is a critical period for second language acquisition”. They add that, “language learning which occurs after the end of the critical period may not be based on the innate biological structures believed to contribute to first language acquisition or second language acquisition in early childhood” (p. 60).

The above discussion raises the important question of whether it is really the younger the better when introducing learners to a language. Cases of immigrant children provide strong evidence for the assumption that the younger a language learner the better he/ she will be in learning a language. It is observed that immigrant children are far better in learning languages and obtaining native-like pronunciation than their parents. One reason for this, suggested by Lightbown and Spada (2000), is that an informal environment is more convenient and there is no stress on these children. They are not required to speak fluently from the beginning and their errors are accepted if not praised.

Fromkin, Rodman and Hyams (2003) assert that “the younger a person is when exposed to a second language, the more likely she is to achieve nativelike competence” (p. 383). In a study (reported in Fromkin Rodman and Hyams, 2003) Jacqueline Johnson and Elissa Newport tested groups of Chinese and Koreans who speak English as a second language and have been in the United States for a minimum of five years. The two language aspects in which these subjects were tested were morphology and syntax. It was found that age affected results remarkably. Young speakers who arrived between age of three and eight were found to be as good as native speakers. Older speakers who arrived between age of eight and fifteen were less competent and did not perform as native speakers. Fromkin, Rodman and Hyams (2003) add:

Moreover, every year seemed to make a difference for this group. The person who arrived at age nine did better than the one who arrived at age ten; those who arrived at age eleven did better than those who arrived at age twelve and so on. The group that arrived between the ages of seventeen and thirty-one had the lowest scores.(p.383).

However, some scientists (e.g.) note that it is more appropriate to address the effects of age in terms of sensitive period rather than critical period in that sensitive period is more lenient with success in SLA, and allows for more spaces to success and ultimate attainment.

1.3 The Effects of Age on the Route and Rate of Language Acquisition

Ellis (1985, p.105) points out that, 'it is necessary to separate out the effects of age on the route of SLA from the effects of age on the rate or success of SLA.' Rate in language acquisition refers to the amount learners grasp from the target language. Route refers to the techniques or strategies learners follow to learn a language. Ellis (1985, p.105) adds:

Rate and success of SLA appear to be strongly influenced by the age of the learner. Where rate is concerned, there is evidence to suggest that older learners are better. That is, if learners at different ages are matched according to the amount of time they have been exposed to the L2, it is the older learners who reach higher levels of proficiency.

Ellis (1985) quotes a study by Snow and Hoefnagel-Hohle (1978) who studied three age groups; adults (15 years and above), children (6 to 10 years old), teenagers (12 to 15 years old). He noted that:

they [Snow and Hoefnagel-Hohle] found that although the adults (15 years and older) outperformed the children (6 to 10 years), the teenagers (12 to 15 years) learnt more rapidly than both. It would appear that although age improves language learning capacity, performance may peak in the teens, after which performance declines. (1985, p.105)

This seems to contradict the popular assumption and the critical period hypothesis that the younger a language learner is the better he or she will be in learning a language. However, they are both found to be true at least partially or in different language aspects as will be manifested later in this paper.

Seliger (1978) (in Ellis, 1985, p.5) suggests one possible reason for the discrepancies in learners levels in different ages suggesting that, "there are multiple critical periods" each affecting a different aspect of language in a certain age of learners. Ellis (1985) provides another justification stating that older learners learn rules and forms of a language consciously and explicitly

being highly concerned about how language functions. Young learners, on the other hand, are more concerned about what language does irrespective of how it functions. (p. 108). In this sense, Munoz (2006,p.127) argues:

One of the most robust findings in second language acquisition (SLA) research is the fact that learners proceed through a similar route, or series of sequences, in the acquisition of a second language(L2) irrespective of their first language (L1). In contrast, variation exists in the rate, or speed of progression through the sequences, and the level of L2 ultimately attained. Thus, both the rate of acquisition and L2 level ultimately attained vary across individuals, but the route is the same.

By reviewing several studies such as Klein et al.(1993) and Dietrich et al. (1995) on L2 morphemes, Munoz (2006) concluded that “data and conclusions reached thereof support the fact of a shared route of acquisition despite differences in L1 and acquisition context.” (p.128).

1.4 The Effects of Age on Syntax and Phonology

This paper is devoted to investigating the role of age in language acquisition and particularly its effects on syntax and phonology, in part because it cannot handle all the language aspects, and because these two aspects are the ones which received most investigation and study. This section discusses the effects of age on phonology and syntax.

Cook (2001, p.133) reports a study carried out by Snow and Hoefnagel-Hohle (1978) where adult and children native speakers of English who went to live in Holland were compared using different types of tests. After three months, it was found that older learners exceeded younger ones in all language aspects of Dutch except pronunciation. However, a year later younger learners were better at pronunciation and older learners were better only at vocabulary. Ramsey and Wright (1974) (in Cook, 2001, p.134) state that they “found younger immigrants to Canada had less foreign accent than older ones”. Cook (2001) concludes that, “Adults start more quickly and then

slow down. Though children start more slowly, they finish up at a higher level” (p.135). Herschensohn (2007, p.3) asserts that, “While L1 learners thoroughly acquire all aspects of the native language, for L2A [second language acquisition] there are differential age effects in different domains- for example L2 learners notoriously have more difficulty getting correct pronunciation than they do fluent syntax”. Fromkin, Rodman and Hyams (2003, p.383) claim that the critical period is shortest for phonology:

there is a gradual decline in L2 acquisition abilities with age and that there are "sensitive periods" for the nativelike mastery of certain aspects of the L2. The sensitive period for phonology is the shortest. To achieve nativelike pronunciation of an L2 generally requires exposure during childhood. Other aspects of language, such as syntax, may have a larger window.

However, Snow and Hoefnagel-Hohle concluded from their study in Ellis (1985,p.105) that, “age was a factor only when it came to morphology and syntax. There were only very small differences on pronunciation tests”. Ellis (1985) cites another study by Oyama (1976) concluding that, “as far as success in pronunciation is concerned, younger learners do better” (p.106).

Munoz (2006) reports a study by Fathman (1975) and concluded that, “older learners did better in the production of correct morphological and syntactic structures” (p. 113). She added that, “it was found that the younger children did better than the older children when they were exposed to English the same period of time” (2006, p. 113). Moreover, she (2006, p. 41) refers to findings from Scovel (1988) stating that, “supporters of the CPH [critical period hypothesis] indicate that the first linguistic area to be influenced by a CP is L2 phonology”. Lightbown and Spada (2000) point out that several studies concerned with the relationship between age and development in a second language showed that older learners almost always exhibit a foreign accent.

It is obvious as most of the studies reviewed earlier in this paper manifest that the effect of age is most significant on phonology. That is, the younger a learner is introduced to a language, the more native-like his or her

pronunciation will be. However some studies witnessed that the early start can contribute to gaining good mastery of syntax and/or morphology. Scovel (1988, p. 101) (cited in Singleton and Ryan, 2004, p. 84) affirms that pronunciation is the one area of language which shows age effects because it has a “neuromuscular basis”, and “physical reality”.

2. Conclusion and Recommendations

Age plays an important role in both L1 and L2 acquisition. Its effects are obvious in different aspects of a language. It also affects the amount and the way learners proceed in their learning of a language, both in L1 and L2. The most prominent and popular assumption is that younger learners are better in learning languages. This paper dealt only with investigating how age affects learning syntax/ morphology and/ or phonology. It also reviews how age affects the way and the amount of language learners learn. According to a number of studies, the effects of age are most prominent and crucial on phonology; whereas, syntax and morphology are found to be better learnt by older learners. Age also affects both how learners learn and how much they learn. It influences learning in that younger learners are usually capable of grasping language easily, whereas older ones usually face more difficulties. Language is better introduced earlier into school curriculums as learners will gain as native-like proficiency as possible. As Lightbown and Spada (2000, p.164) put it, “the research evidence is fairly strong that only those who begin second language learning at an early age will eventually be indistinguishable from native speakers”.

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