Age as an Affective Factor in Second Language Acquisition

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ABSTRACT

This paper examines the relationship of age factor to second language acquisition. Age as an affective factor brings about different performance stages in second as well as first language learning. Traditionally, research in Critical Period Hypothesis and other variables has derived two major aspects of language learning--the younger = the better and the older = the better. However, more recent research has begun to show that there is no linear pattern of learning among the same age group of learners, and they learn differently and individually depending on variables like learning opportunities, the motivation to learn, individual differences and learning styles in second language acquisition.

Age is one of the most important affective factors in Second Language Acquisition (SLA). There is some consensus among SLA researchers that age as an affective factor that brings about different performance stages in second language learning. Most experts also agree that individual learners learn differently depending on many variables like learning opportunities, the motivation to learn, individual differences and learning styles in second language acquisition. However, there is little consensus as to how far individuals of the same age group of learners follow a similar and/or linear pattern of language acquisition. The question of how developmental stages interact with individual learning differences is still a question of great debate.

It is generally believed that younger learners have certain advantages over older learners in language learning. The common notion is that younger children learn L2 easily and quickly in comparison to older children (Ellis, 2008; Larsen-Freeman, 2008; Mayberry & Lock, 2003). The relationship between age and success in SLA, though complex in nature, is linked to the Critical Period Hypothesis (CPH). CPH, also known as "the sensitive period," is defined as "the period during which a child can acquire language easily, rapidly, perfectly, and without instruction" (Richards & Schmidt, 2002, p.145). The CPH suggests that a period of time, between birth and somewhere around the age when a child enters puberty, exists in which the learning a second language can be accomplished more rapidly and easily than times falling outside of this period i.e. post puberty (Larsen-Freeman & Long, 2008).

SLA theories and research have explained the impact of age in second language acquisition. As reported by Lightbown and Spada (2008), learning depends on learners' characteristics and the environment. Their findings suggested that older learners have a higher level of problem solving and metalinguistics abilities than younger learners. Some other researchers have focused on learners' pronunciation, syntax and grammatical morphemes. Mark Patkowski (1982) examined the level of spoken English of sixty-seven immigrants to the U.S. His finding was that pre-puberty learners acquire second language better than post-puberty learners. He also pointed out that two other factors—length of residence and amount of instruction—are inseparable from the age factor.

Johnson and Newport (quoted in Lightbown & Spada, 2008) found native-like language abilities and the performance levels lower in older children than younger in a study of forty-six Chinese and Koreans speakers. On the other hand, Snow and Hoefnagel-Hohle (1982), from their research carried in Holland, concluded that adults learned faster than children and the rate of second language learning was higher. David Singleton (2003) also declared that the tendency for "younger learners to do better in the long run in the matter of second language lexical acquisition is no more than a tendency" (p. 22). In this paper, an attempt is made to study and analyze the age related research on the basis of critical period hypothesis and other relevant variables.

The key question in this paper is how age affects second language acquisition. Do people of the same age group possess the same learning characteristics and learn in the same ratio in SLA? Are there any certain features that the researchers have agreed upon regarding the age factor in SLA and CPH?

The notion of critical period for a second language acquisition has been associated with several hypotheses. Some researchers have focused on the view that the younger learners as the better learners whereas others opine the older learners as the better learners. However, there are different perspectives on how the children and adults learn a foreign or second language. Adults naturally find themselves in such situations that demand more complex language and expression of more complicated ideas whereas children lack pressure and maturity in second language learning.

David Singleton (1989) offered a number of proposals related to age and second language acquisition. The most popular notions are "the younger =the better" and "the older =the better" (Singleton, p. 31). He, on the basis of previous studies and research on age factor, focused on learners' pronunciation skill and other linguistics features. There are a number of research to support "the younger the better" hypothesis. Yamanda *et al.* (qtd. in Singleton, 1989) studied 30 Japanese elementary school pupils of seven to ten ages old. These students did not have any previous experience of English. The researchers used a list of 40 English words and recorded the rate of success of the students. Their finding was that more than average older learners decreased with age i.e. the older the age the lower the score.

Furthermore, Mark S. Patkowski (1982) carried out a research on 67 highly educated immigrants to the United States from various backgrounds. In his control subjects, 33 subjects were those who had come to the United States before the age of 15 (pre-puberty group) and 34 subjects who were post-puberty group with similar backgrounds. He examined the spoken English of the subjects, and analyzed "a difference between learners who began to learn English before puberty and those who began learning English later after puberty" (Patkowski, 1982, p. 58). His results showed a strong negative relationship between age of arrival and syntactic rating. He concluded that the pre-puberty group was better in language learning than the post-puberty group. He further addressed:

> …the only factor which was highly associated with the level of syntactic proficiency attained by learners was the age at which acquisition of English began. Practice and instructional variables showed little or no association with the dependent variables. The result, then, appeared to strongly support the hypothesis of an age-related limitation on the ability to acquire full command of a second language. (Patkowski, 1982, p. 59)

He also concluded that the age factor is highly related to other several factors like the numbers of years spent in the United States, amount of information exposure to English and amount of formal instruction in English.

One of the supporting evidences in the field of second language acquisition comes from the experience of immigrants. A group of researchers have shown a relationship between age of entry, length of residence and level of language acquisition (Singleton 1989; Ekstrand 1982; Asher & Gracia 1989; Lightbown & Spada 2008). Asher and Gracia examined acquisition of pronunciation of 71 Cuban immigrants to California. The subjects were of aged groups from seven to 19 years. The majority of them had been in the United States for about five years. They concluded that "not one of the 71 Cuban subjects was judged to have American native pronunciation" (qtd. in Singleton, 1989, p. 83). They also figured out a fact that the younger a child had been when entering the United States, the higher the probability of a native like accent.

The Lenneburgian notion of CPH that puberty as a milestone for SLA has been reversed by the other researchers. Carroll (1963) suggested that the ability to acquire a native like accent declines toward puberty. Ekstrand (1982) carried out a research on age and length of residence of 2400 Swedish pupils. The test consisted of six areas including pronunciation, diction, listening, reading, oral and written production. Ekstrand grouped the total population into 26 categories according to third month of year of birth and observed effects of age and effects of length of residence in the process of second language. He found that language learning ability goes almost linearly with age. He also noticed that social and emotional adjustment did not seem to be related to age. He deduced that age was strongly correlated with grade levels because quality and quantity of instruction was an important factor in second language learning. For Ekstrand, the more developed the brain was, the better it was suited for second language learning.

Susan Oyama (1976) studied 60 male Italian immigrants who entered to the United States at ages ranging from six to 20. She examined the degree of American accent and proficiency in English listening. She concluded that age is as an important factor to achieve native like accent. The youngest arrivals performed a better accent. She has shown the relation of age and listening comprehension as follows:

> …those subjects who began learning English before age 11 showed comprehension score similar to those of native speakers, whereas later arrivals did less well; those who arrived after the age of 16 showed markedly lower comprehension scores than the native. (Oyama, 1982, p. 23)

A further immigrant study appeared in support of "the younger the better" hypothesis. Johnson and Newport (qtd. in Lightbown & Spada, 2008) selected 46 Chinese and Korean experimental subjects in their research. They tested some rules of English morphology and syntax among the participants of aged groups from three to 15 and with those aged groups from 17 to 39. The result was that those who began learning later did not have native like language abilities and their performance on the test varied more widely.

Robert Dekeyser (2000) conducted a replication of the Johnson and Newport with a group of Hungarian immigrants to the United States. On the contrary, he concluded that adult learners were better than the younger ones.

The second strong hypothesis is that older learners are more successful that than younger language learners in SLA. This notion was highly supported by a number of short term experimental researchers. These studies and research were based on teaching projects and second language immersion programs. Some of these studies have highlighted adolescents and adults of different ages where results have indicated that the older learners are far better than the younger ones.

In 1967 Ashor and Price (as cited in Singleton, 1989) have carried out an experiment with 96 students from the second, fourth and eighth grades of a school and 37 undergraduate students from a college. The subjects did not have any previous knowledge of Russian, the targeted language. After three short trainings conducted in Russian language, the results showed that the eight graders performed significantly better than the second graders and the fourth graders. They also noticed a consistently positive relationship with advancing age because of above average mental ability of the adults. Politzer and Weiss (as quoted in Singleton, 1989) have conducted another study in which they found that an advantage of SLA for older learners than younger ones. Their subjects were second, fifth, seventh and ninth graders. The experimental procedures were consisted of an auditory discrimination test, a pronunciation test and a reading test among 257 pupils. They recorded a gradual improvement of scores with an increase age in all three tests.

Similarly, Olson and Samuel in the 1970s (qtd. in Singleton, 1989) have investigated the relative capacity of native English speakers in three different age groups on 20 elementary pupils, 20 junior high school pupils and 20 college students. On the test of pronunciation, it was found that two older groups performed significantly better than the elementary age group.

In other studies on age and SLA, many researchers have mentioned a similar finding that adult subjects performed better than the children (Bland & Keislar, 1966; Smith & Braine, 1973; Burstall & her colleagues, 1974; Singleton, 1989). Bland and Keislar took six fifth graders and four kindergartners in their study. They conducted an individualized program of oral French. They mentioned that "amongst the fifth graders this time ranged from 4.5 to 11 hours, the mean being 6.9 hours, whereas amongst the kindergarteners the ranges from 12.5 to 17.5 hours and the mean was 15.1 hours" (Qtd. in Singleton 1989, p. 98). In other words, the younger learners took more than twice as long as the older learners. A large scale experiment was conducted by Burstall and her colleagues (Qtd. in Singleton 1989) in the 1970s. The study included three age groups of

pupils from selected primary schools in England and Wales. Among the 11 year old, 13 year old and 16 year old students, the results indicated that older students dramatically achieved higher score in listening and speaking tests than the younger ones.

Other researchers of SLA interested in assessing phonological skills of learners suggest a common belief that younger learners acquire a native like accent in the target language. Dunkel and Pillet (reported in Singleton, 1989) compared the proficiency in French between elementary school pupils and beginning students of French from the university. They found that the younger learners' pronunciation was better than that of the older ones. However, in both written and aural tests, the university students had better performance than the younger ones. In another study, Fathman and Precup (reported in Singleton, 1989) tested oral proficiency in English on 20 children and 20 adults in a formal setting in Mexico. Their finding also brought a similar conclusion that the children scored better in English pronunciation than the adults but the adults scored better then the children in syntax. Some studies, on the other hand, have focused on the issues of culture and variations of accent among the speakers of the same language. Lobov (1920) has claimed that "people rarely acquire the accent of a particular region if they move into that region after puberty" (qtd. in Singleton, 1989, p. 111).

While considering younger learners in long run, Stephen Krashen (1979) has forwarded three proposals in the domain of morphsyntax. Krashen's positions in SLA are as following:

> Adults proceed through early stages of syntactic and morphological development faster than children (where time and exposure are held constant).
>
> Older children acquire faster than younger children (again time and exposure are held constant).

> Acquirers who begin natural exposure to second languages during childhood generally achieve higher second language proficiency than those beginning as adults. (qtd. in Singleton, 1989, p. 117)

Krashen *et al.* studied syntax and morphology of children in formal and informal learning contexts. They claimed that older learners proceed through the early stages of second language grammatical development more quickly than younger learners. Anan Fathman (1982) observed a difference in the rate of learning English phonology, morphology and syntax based on the differences in age. She focused on the children aged 11 to 15 years who received significantly higher scores in learning the morphology and syntax of a second language than those children of aged six to ten years.

One of the most significant studies related to age and SLA comes from the research of Catherine E. Snow and Marian Hoefnagel-Hohle (1982). They investigated 51 English subjects in five age groups whose target language was Dutch. The subjects' accomplishments at three points in the Netherlands were compared with the accomplishments of two advanced speakers of Dutch and native speakers. The beginners were tested three times at 4 to 5 month intervals, but the advanced learners were tested only once. The subjects were tested individually at school or at home in various categories—pronunciation, auditory discrimination, morphology, sentence repetition, sentence translation, sentence judgment, Peabody picture vocabulary test, story comprehension and storytelling. The results of their study gave strong evidence against the critical period hypothesis. All the tests showed a rapid learning by the 12 to 15 years old and adults during the first few months of acquisition. They mentioned:

> The adults…fell increasingly behind because their subsequent improvement was very slow. The teenagers had achieved almost native performance extremely quickly, within a few months of starting to speak Dutch….The crucial findings of

> relevance for evaluating the CPH were that the 3 to 5 years old scored consistently worse than the older groups on all the test and that the 12 to 15 years old showed the most rapid acquisition of all the skills tested. (Snow & Hoefnagel-Hohle, 1982, p. 103)

Their finding rejected the notion of younger learners as better learners in L2 acquisition. In the second study, Snow and Hoefnagel-Hohle took 81 subjects. Of them, 51 were beginners and 31were advanced learners. In the result, it was found that in all cases the adolescent and adult subjects outperformed the younger subjects.

The research has shown non-liner relationship between age and second language acquisition. Whether the long term or short term studies are conducted on syntax and morphology or pronunciation of a second language, there are as many conflicting views as the researchers. To address this situation, it is opted to quote Singleton (1989) that "beyond the strict terms of Krashen *et. al*.'s hypothesis the evidence concerning short term versus long term language attainment is more confused" (p.119) and there is no common argument agreed by all the research. David Birdsong (2006) has studied theoretical issues and empirical findings of age related research of second language acquisition. He had found that brain memory, learning conditions and second language processing speed are connected with age factor. He has pointed out that morphological changes and cognitive process are different in young and adult learners.

The next component besides Critical Period Hypothesis of second language acquisition is the variables related to the age factor. These variables can be motivation, anxiety, self confidence, attitude, learning styles and so on. They are responsible in language acquisition in both children and adults. Their direct relationship to age as an indicator of language learning has been studied by various researchers. John Archibald (2005) has said that it is hard to say whether critical period exists or not. He argued that "it is much more difficult to predict knowledge or

ability in any of the other areas of communicative competence (syntax, cohesion, sociolinguistics, etc.) based on age of acquisition" (Archibald, 2005, p. 420). Rather he valued individual differences, the L2 classroom, modified input, modified interaction, and learning environment in second language learning context. Mary Schleppegrell (2008) has focused on health, classroom practices and learning styles as age related factors in second language learning. She says that older adults learn a foreign language for a specific purpose "to be more effective professionally, to be able to service in an anticipated foreign situation or for other instrumental reasons" (Schleppegrell, 2008, p. 3). On the other hand, younger learners may not have extrinsic motivation or may not see a specific goal in learning another language. It is also noticed that children and adults do not always get the same quality and quantity of language input in both formal and informal learning settings (Lightbown & Spada, 2008). It is also hard to say how these variables work as a filter or barrier in learning process of young and adults.

As in Collier's study (1987) (qtd. in Singleton, 1989), the barrier of anxiety sometimes makes the adults less successful in second language. Language input is another factor linked to age. Stephen Krashen believes that the learner improves when he or she receives second language input at a level of comprehensible input (i+1). For Krashen the natural comprehension input has become the fundamental principle in SLA. This comprehensible input may change with age where older learners get an advantage over younger ones (Lightbown & Spada, 2008).

Summing up, age is one of the characteristics that determine the way in which an individual learns second language. Age is highly associated with critical period in many research studies. There are a number of controversial issues related to second language acquisition and critical period hypothesis. As Singleton (2005) has predicted, a multiplicity of CPs, "like mythical hydra, whose multiplicity of heads and capacity to produce new heads rendered it impossible to deal with" (p. 288). He declares the end of critical period. Some researchers

limited the CP between perinatality and puberty, while the others extended it after the puberty. In the realm of pedagogy, the researchers have advocated CPH into two main categories—the younger the better and the older the better. A group of researchers including Singleton, Yamanda *et al.,* Carroll and *et al*, and Patkowski believed that the young learners have higher learning potentiality than the adults whereas Johnson and Newport, Dekeyser, Asher and Price, Politzer and Weiss, Olson and Samuel opined the opposite. The young learners are considered fluent in communication of the second language and achieve native like accent. Learners after the age of puberty do not acquire native like accent of a second language but have complex learning pattern. Research suggests that children and adults L2 learners pass through different developmental states in second language learning. Learning depends on the cognitive maturity and neurological factors. Julia VanSickle and Sarah Ferris (as quoted in Singleton, 2005) have shown the relation between age and second language acquisition as, "One of the dangers of the emphasis on critical periods is that it prompts us to pay too much attention to when learning occurs and too little attention to how learning might best occur" (p. 105). Age is not everything in second language learning. However, factors related to the age, for example the learning opportunities, the motivation to learn, individual differences, and learning styles, are also important determining variables that affect the rate of second language learning in various developmental stages of the learners.

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