

# Influence of Starting Age on Second Language Acquisition

Yadi Deng<sup>1</sup>

Department of English Teaching and Research  
The Affiliated High School of South China  
Normal University  
Guangzhou, China

Qing Wang<sup>2</sup>

Department of Civil Engineering  
Guangzhou University  
Guangzhou, China

**Abstract**—Individual differences are believed to be in close connection with second language acquisition (SLA). In this paper, the key age hypothesis is used to review and analyze the learner's starting age, and the learning characteristics and learning conditions of the second language learners of young children, adolescents and adults are studied through comparative analysis. The results show that starting age not only affects the efficiency of second language acquisition, but also affects the proficiency of second language acquisition. Learners at different ages maintain different advantages according to contrastive analysis. Best starting age for SLA is essential to be speculated carefully about the goals of instructional programs and contexts before concluding about necessity of the earliest possible start.

**Keywords**—Second language acquisition; Starting age; Learners characteristics; Learning conditions

## I. INTRODUCTION

Children are almost always successful in acquiring the language spoken to them in early childhood on the condition that they have adequate opportunities to use the language over time. This is why many people believe that, in school programs for second language teaching, 'younger is better'. However, experience of second language learners (SL learners) shows that starting early is no guarantee of success and acquisition proficiency varies largely. Therefore, both educators and researchers have gained a great deal of interest in understanding how characteristics of individuals are related to the ability to succeed in second language acquisition (SLA).

Based on personal experiences or that of people around, individual differences are believed to be in close connection with acquisition success in language learning. Many teachers are convinced that personality affects SLA in many aspects, an obvious example is that extroverted students who interact without inhibition in the second language and seek opportunities to practice language skills will be the most successful learners [1]. In addition, other characteristics such as intelligence, aptitude, motivation and beliefs, are often believed to predict success in language learning.

Some of the individual characteristics that have been investigated in the effort to discover explanations for differences in learning outcomes. Influences of learners' personalities, aptitude, learning styles, learning strategies and motivations were reviewed by Dornyei [2] through comparing related researches in the last decades. He concluded by

emphasizing the evidence that individual differences are strongly affected by the situation in which learning takes place rather than being 'context-independent and absolute'. The predictions of learning outcomes in SLA with impact of individual differences are reviewed by Lightbown and Spada [3]. Understanding the relationship between individual characteristics and success in SLA is a big challenge. Nevertheless, researches in this area are of great importance to researchers, educators and larger communities. Researchers seek to know how different cognitive and personality variables are related and how they interact with learners' experiences, in order to gain a better understanding of human learning. Educators hope to find methods and strategies of helping learners with different characteristics to achieve success in SLA. The larger communities are also concerned because SLA has an enormous impact on shaping opportunities for education, employment, mobility, and other societal benefits. Herein, to simplify the relationship between learner characteristics and learning outcomes in SLA, age at which learning begins is easier to define and measure than a learner's personality, aptitude, or motivation, but still the connection between age and success in SLA is complicated or controversial. Therefore, this paper reviews the relationship of starting age and SLA by critical period hypothesis, furthermore, learners characteristics and learning conditions of young child, adolescent and adult second language learners were studied through contrastive analysis.

## II. RELATIONSHIP OF AGE AND SLA BY CRITICAL PERIOD HYPOTHESIS

It is frequently observed that most children from immigrant families eventually speak the language of their new community more native-like and fluent than their parents, although many adult SL learners achieve excellent language skills. One theory to explain the above difference may be the Critical Period Hypothesis (CPH), assuming that there is a certain time in human development when the brain is predisposed for success in first language acquisition[4,5]. According to CPH, developmental changes in the brain affect the nature of language acquisition, and language learning that occurs after the end of the critical period may not be based on the innate biological structures for both first and second language acquisition. Herein, older learners tend to depend on more general learning abilities as they might apply in acquiring other kinds of skills or information which are not as effective as the

more specific, innate capacities that are available to the young children. It is most often claimed that the critical period ends somewhere around puberty, while some researchers suggest it could be even earlier. Evidence was found that there may be multiple critical periods, related to different aspects of language learning. Taking pronunciation for example, the ability to acquire the phonation patterns of a new language may end earlier than vocabulary comprehension.

Both the comparison of children and adults as SL learners and the biological language learning condition differences suggested by the CPH are of significance and difficulty at the same time. Younger learners in informal language learning environments usually have more time to devote by hearing and using the language in environments where they do not experience strong pressure, speaking fluently and accurately from the very beginning of learning. Furthermore, their early imperfect efforts are often praised and encouraged, or at least accepted. On the contrary, older learners are more likely to find themselves in situations that demand more complex language and the expression of more complicated ideas. Such conditions often embarrass them due to the lack of mastery and frustrate them because of inadequacy in trying to express themselves precisely. These negative feelings may affect their motivation and willingness to place themselves in circumstances where they are required to use the new language [6].

CPH based researches through personal experience or informal observation of adult learners' difficulties have led some educators and policy makers as well as many parents to conclude that second language instruction is most likely to succeed when learners begin at very young age [7]. However, some comparison studies of the second language development of older and younger learners learning in similar circumstances have indicated that older learners are more efficient by using their metalinguistic knowledge, memory strategies, and problem-solving skills. In educational settings, learners who begin learning a second language at primary school level do not always achieve greater proficiency in the long run than those who begin in adolescence.

Patkowski [8] explored the relationship between age and second language development and found that age is an important factor in second language learning of which the goal is native-like proficiency. 67 highly educated immigrants to the United States who had started to learn English at various ages, with a residence length of more than five years were studied. 15 native-born Americans with a similarly high level of education were set considered to be the second language speakers' target. Results show that the transcripts of all native speakers and 32 out of 33 second language speakers who had begun learning English before the age of 15 were rated 4+ or 5 (5 in total). In contrast, 27 of the 32 post-puberty learners were rated between 3 and 4, but a few learners were rated higher (4+ or 5) and one was rated 2+. The performance of post-puberty group corresponds very well with general phenomenon if one were measuring success in learning almost any kind of skill or knowledge: some people did extremely well; some did poorly; most were in the middle.

An important impact on the way how studies of language acquisition shall be orthodoxly analyzed has been expressed in

the work of Vivian Cook[9]. He made a strong case for the inappropriateness of using the criterion of 'indistinguishable from a native speaker' as the basis for success in SLA. Indeed, Cook argues that a second language speaker or bilingual person should not be compared to monolingual native speakers because the real goal is 'multicompetence'. Another study of 46 Chinese and Korean speakers who had begun to learn English at different ages were conducted by Johnson and Newport [10]. The participants were asked to make grammaticality judgments of a large number of sentences that tested 12 rules of English morphology and syntax. It was proved that age of arrival was a significant predictor of success based on the test results. Learners who began earliest achieved the highest scores on the judgments task, while those who began later were less likely to judge the sentences correctly and their performance on the test varied more widely.

Regarding the rate of learning, the study carried out by Snow and Hohle [11] reveals that adults and adolescents progress considerably in second language learning. Still, early exposure to the second language may lead to the loss of children's first language. Wong Fillmore [12] found that when children are surrounded in a different language in school for a long period before school, their development of first language may be slowed down or incomplete, which can result in social and psychological problems. As children's first language plays an important role in their life, teaching second language later will be more efficient. The time it takes to achieve the goal of second language teaching is another consideration. Burstall's study [13] shows that there is no difference between students who began earlier learning program and students with no previous instruction because starting learning earlier is not equivalent to more hours of instruction, with no total hours increasing. To make matters worse, learners beginning earlier instruction suffer from frustration due to lack of progress and consequently their motivation will be influenced.

### III. CONTRASTIVE ANALYSIS OF YOUNG CHILD, ADOLESCENT AND ADULT SECOND LANGUAGE LEARNERS

#### A. Learner characteristics

The main differences of characteristics among young child, adolescent and adult SL learners may exists in first language, cognitive maturity, metalinguistic awareness, world knowledge and anxiety about speaking, as listed in Table 1.

TABLE I CHARACTERISTICS OF SL LEARNERS IN YOUNG CHILDREN, ADOLESCENTS AND ADULTS

Items	Young child	Adolescent	Adult
a Another language	1	3	4
b Cognitive maturity	1	2	4
c Metalinguistic awareness	1	2	4
d World knowledge	1	2	4
e No anxiety about speaking	4	2	2

1=usually absent, 2=mostly absent, 3=basicly present, 4=usually present

To begin with, all SL learners have the advantage of knowing how languages work since they have learned at least

one language. However, they sometimes apply the rules of other languages in the use of second language, resulting some errors which first languages learners would not make. This influence is among young child, adolescent as well as adult learners based on the degree of mastery of first language.

In terms of cognitive maturity or metalinguistic awareness, compared with older SL learners, younger learners achieve little. Despite the fact that SL learners of young age have begun to develop the characteristics, they still have a long way to go in the area of world knowledge shown in Table1(b,c,d). Older learners have advantages over the young learners in cognitive maturity and metalinguistic awareness, which help solve problems and involve in the discussions about SLA. These advantages are especially important for those learning in classrooms and having limited time to learn the language. However, some theorists suggest that the cognitive skills actually interfere with SLA in view of that the SLA requires different mental abilities which are specified to language learning. The older learners gradually lose the innate language acquisition ability by using their metalinguistic abilities and other abilities so precisely.

Additionally, differences exist in terms of attitude and culture between children and adults. Children are more willing to use the language even though they have a quite limited proficiency of the language. On the other hand, adults and adolescents feel stressful when they speak and find it quite difficult to express themselves clearly and precisely. However, children still differ in their willingness to speak. Some are quite willing to speak continuously in new language while others prefer to keep silent and listen to others during the social interaction with peers.

**B. Learning conditions**

As for learning conditions, young child, adolescent and adult SL learners vary greatly, particularly in learning circumstances, ample time, corrective feedback and modified input. These factor are summarized and analyzed in Table2.

TABLE II LEARNING CONDITIONS OF SL LEARNERS IN YOUNG CHILDREN, ADOLESCENTS AND ADULTS

Items	Young child	Adolescent	Adult
a Freedom to be silent	4	1	1
b Ample time	4	2	1
c Corrective feedback (grammar/pronunciation)	1	4	1
d Corrective feedback (meaning/ word choice/ politeness)	1	4	2
e Modified input	2	4	2

1=usually absent, 2=mostly absent, 3=basically present, 4=usually present

Young SL learners have the freedom to keep silent before they are able and ready to speak in the classrooms. They can practice their SLA by singing songs and playing games. Older SL learners have no such freedom, for they are forced to speak in the early days. They have to fulfill the requirements in the classroom as well as everyday tasks such as job interview, shopping and so on.

The amount of time is another difference among different starting age of SLA learners. First language learner undoubtedly spend much time on languages spoken around. Yong SL may also be exposed to their second language every day, playing on the playground, learning in the classroom or watching TV. Older learners however are much less exposed to the language. A foreign language student if not strictly required will have no more than a few hundred hours exposed to language. Adult learners of immigrants use the language in limited situations and classroom learners spend less time using the new language and they also restricted to small range of discourse types. The language taught in the classroom is formal and it is not uncommon that teachers switch to first language for discipline. As a result, the students have lost the opportunity to use the language in real communication.

When taking the corrective feedback into account, parents addresses the mistake in meaning but ignore the grammatical accuracy of children’s language. Since many people think it impolite to interrupt when someone is speaking they choose to respond to an error even though they don’t really understand what the speaker is trying to say [14]. Therefore, the grammar and pronunciation mistake are not addressed. In a situation where a SLA learner seems to use inappropriate language, the interlocutor may feel uncomfortable and puzzled thinking about whether the speaker is rude or not knowing the polite way to make himself/herself understood. In the case the interlocutor still may not tell what goes wrong. The feedback on error usually occurs in the classroom, but it is not always supplied consistently [15].

The exposure to modified or adapted input is common to all age learners. Child-directed speech is important for the first language acquisition. The modified input known as teacher talk or foreign talk in different contexts can help SL learners understand what adjustment they can make. However, sometimes if the modified input is in the form of simply talking louder, it will become a painful conversation between the teacher and learners.

**IV. CONCLUSION**

In this paper, individual characteristics of starting age were reviewed in relation with SLA by critical period hypothesis, learners characteristics and learning conditions of young child, adolescent and adult second language learners were studied through contrastive analysis. Conclusions can be drawn as follows:

- Age at which learners begin affects not only the learning efficiency but also the proficiency in second language learning. Younger learners were proved to maintain more superiority than adults in oral speaking, grammaticality judgments and rate of learning according to critical period hypothesis.
- Older second language learners gain characteristic advantages over children in learning skills, cognitive maturity, metalinguistic awareness and world knowledge, but show less competitiveness in the anxiety about speaking.
- Considering learning condition, younger learners almost always get freedom to be silent and have ample time to

practice second language, while adolescents in second language classrooms exhibit great merits in corrective feedback and modified input.

- In second or foreign language teaching, starting early is no guarantee of success since older learners can attain high levels of proficiency, as for the consideration of best age at which to begin second language instruction, it is essential to speculate carefully about the goals of an instructional program and the context before concluding about the necessity of the earliest possible start.

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