

King Abdul Aziz University

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Age and Acquisition (Part 1)

### **References:**

Brown, D. H. (2000). *Principles of language learning & teaching*. (4th ed.). New York: Longman. (pp. 49-58)

Lightbown, P.M. & Spada, N. (1993). *How Languages are Learned*. Oxford University Press. (p. 11)

### **INTRODUCTION**

The increased pace of research on first language acquisition in the last half of the twentieth century attracted the attention of:

- linguists
- educators

Learning a second language, particularly in an educational setting, can meet with great difficulty and sometimes failure, so learning something from a systematic study of first language learning experience can help us understand things better.

### **Important questions that need answers:**

- How should second language teachers interpret the many facets and sometimes conflicting findings of first language research?
- Do childhood and adulthood, and the differences between them, hold some keys to language acquisition models and theories?

### **DISPELLING MYTHS**

The first step in investigating age and acquisition might be to dispel some myths about the relationship between first and second language acquisition.

H. H. Stern (1970, cited in Brown, 2000, p. 50) summarized some common arguments to recommend a second language teaching method or procedure on the basis of first language acquisition:

1. In language teaching, we must practice and practice, again and again. Just watch a small child learning his mother tongue. He repeats things over and over again. During the language learning stage' he practices all the time. This is what we must also do when we learn a foreign language.
2. Language learning is mainly a matter of imitation. You must be a mimic. Just like a small child. He imitates everything.
3. First, we practice the separate sounds, then words, then sentences. That is the natural order and is therefore right for learning a foreign language.

4. Watch a small child's speech development. First he listens, then he speaks. Understanding always precedes speaking. Therefore, this must be the right order of presenting the skills in a foreign language.
5. A small child listens and speaks and no one would dream of making him read or write. Reading and writing are advanced stages of language development. The natural order for first and second language learning is listening, speaking, reading, and then writing.
6. You did not have to translate when you were small. If you were able to learn your own language without translation, you should be able to learn a foreign language in the same way.
7. A small child simply uses language. He does not learn formal grammar. You don't tell him about verbs and nouns. Yet he learns the language perfectly. It is equally unnecessary to use grammatical conceptualization in teaching a foreign language.

These statements imply two things:

- They represent the views of those who felt that "the first language learner was looked upon as the foreign language teacher's dream: a student who mysteriously laps up his vocabulary, whose pronunciation, in spite of occasional lapses, is impeccable, while morphology and syntax, instead of being a constant headache, come to him like a dream" (Stern, 1970, cited in Brown, 2000, p.50).
- They also tend to represent the views of those who were dominated by a behavioristic theory of language in which the first language acquisition process was viewed as consisting of rote practice, habit formation, shaping, overlearning, reinforcement, conditioning, association, stimulus and response, and who therefore assumed that the second language learning process involves the same constructs.

This shows us that we need to enrich our understanding of the second language learning process itself.

So what happened? What is the history behind all this?

As cognitive and constructivist research on first language acquisition gathered momentum, second language researchers and foreign language teachers began to recognize the mistakes in drawing direct global analogies between first and second language acquisition.

One mistake was identified by David Ausubel (1964, cited in Brown, 2000, p. 51).

Ausubel outlined a number of problems with the then- popular Audiolingual Method. He issued the following warnings and statements:

- The rote learning practice of audiolingual drills lacked the meaningfulness necessary for successful first and second language acquisition.
- Adults learning a foreign language could, with their full cognitive capacities, benefit from deductive presentations of grammar.
- The native language of the learner is not just an interfering factor- it can facilitate learning a second language.
- The written form of the language could be beneficial.
- Students could be overwhelmed by language spoken at its "natural speed", and they, like children, could benefit from more deliberative speech from the teacher.

- These conclusions were derived from Ausubel's cognitive perspective, which ran counter to prevailing behavioristic paradigms on which the Audiolingual Method was based.
- Ausubel's criticism may have been ahead of its time, for in 1964 few teachers were ready to entertain doubts about the widely accepted method.
- By the 1970s and 1980s, criticism of earlier direct analogies between first and second language acquisition had reached full steam.
- Stern (1970) and many others, addressed the inconsistencies of such analogies, but at the same time recognized the legitimate similarities that, if viewed cautiously, allowed one to draw some constructive conclusions about second language learning.

### TYPES OF COMPARISON & CONTRAST

The comparison of first and second language acquisition can easily be oversimplified.

At the very least, one needs to approach the comparison by first considering the differences between children and adults:

- It is, in one sense, illogical to compare the *first* language acquisition of a *child* with the *second* language acquisition of an *adult*.
- It is much more logical to compare first and second language learning in children or to compare second language learning in children and adults.
- Nevertheless, Child 1<sup>st</sup> language acquisition and adult 2<sup>nd</sup> language acquisition are common and important categories of acquisition to compare.

	CHILD	ADULT	
<b>L1</b>	C1	A1	(L1=1 <sup>st</sup> language/ L2= 2 <sup>nd</sup> language)
<b>L2</b>	C2	A2	(C=Child/ A=Adult)

The figure represents four possible categories to compare, defined by age and type of acquisition.

Cell A1 is clearly representative of an abnormal situation. There have been few recorded instances of an adult acquiring a first language. e.g. Genie, a thirteen year-old girl who had been socially isolated and abused all her life until she was discovered, and who was then faced with the task of acquiring a first language. Accounts of "wolf children" or instances of severe disability fall into this category.

The other three cells:

1. 1<sup>st</sup> and 2<sup>nd</sup> language acquisition in children (C1-C2), holding age constant
2. 2<sup>nd</sup> language acquisition in children and adults (C2-A2), holding second language constant
3. 1<sup>st</sup> language acquisition in children and second language acquisition in adults (C1-A2). (Many of the traditional comparisons were of this type.)

### **The Critical Period Hypothesis:**

Eric Lenneberg (1967) argued that the LAD, like other biological functions, works successfully only when it is stimulated at the right time – a time which is referred to as the ‘critical period’

This notion that there is a specific and limited time period for language acquisition is referred to as the *critical period hypothesis* (CPH).

There are two versions of the CPH:

- **The strong version** suggests that children must acquire their first language by puberty or they will never be able to learn from subsequent exposure.
- **The weak version** is that language learning will be more difficult and incomplete after puberty.

The Critical Period Hypothesis (CPH) claims that there is such a biological timetable.

Initially the notion of a critical period was connected only to first language acquisition.

Second language researchers have outlined the possibilities of extrapolating the CPH to second language contexts.

This has led some to assume, *incorrectly*, that by the age of twelve or thirteen you are "over the hill" when it comes to the possibility of successful second language learning.

Such an assumption must be viewed in the light of what it really means to be "successful" in learning a second language, and particularly the role of *accent* as a component of success.

To examine these issues, we will look at:

- neurological considerations
- phonological considerations
- cognitive considerations
- affective considerations
- linguistic considerations

## NEUROLOGICAL CONSIDERATIONS

The study of the function of the brain in the process of acquisition is one of many promising areas of inquiry.

### Hemispheric Lateralization

Some scholars have singled out the **lateralization** of the brain as the key to answering the question: *Does the maturation of the brain at some stage spell the doom of language acquisition ability?*

There is evidence in neurological research that as the human brain matures, certain functions are assigned, or "lateralized," to the left hemisphere of the brain (*intellectual, logical, and analytic functions*) and certain other functions to the right hemisphere (*emotional and social needs*).

Language functions appear to be controlled mainly in the left hemisphere, although there is a good deal of conflicting evidence. For example, patients who have had left hemispherectomies have been capable of comprehending and producing an amazing amount of language. But in general, a stroke or accident victim who suffers a lesion in the left hemisphere will manifest some language impairment, which is less often the case with right hemisphere lesions.

2nd language researchers have been asking the question: *When does lateralization take place? How does the lateralization process affect language acquisition?*

- Eric Lenneberg (1967) and others suggested that lateralization is a slow process that begins around the age of two and is completed around puberty. During this time the child is neurologically assigning functions little by little to one side of the brain or the other; included in these functions, of course, is language. And it has been found that children up to the age of puberty who suffer injury to the left hemisphere are able to relocalize linguistic functions to the right hemisphere, to "relearn" their first language with relatively little impairment.
- Thomas Scovel (1969) extended these findings to propose a relationship between lateralization and second language acquisition (SLA). He suggested that the plasticity of the brain prior to puberty enables children to acquire not only their first language but also a second language, and that possibly it is the very accomplishment of lateralization that makes it difficult for people to be able ever again to easily acquire fluent control of a second language, or at least to acquire it with an "authentic" (nativelike) pronunciation. While Scovel's (1969) suggestion had only marginal experimental basis, it prompted him and other researchers to take a careful look at neurological factors in first and second language acquisition. This research considered the possibility that there is a critical period not only for first language acquisition but also, by extension, for SLA.

Much of the neurological argument centers on the *time* of lateralization.

- While Lenneberg (1967) contended that lateralization is complete around puberty, Norman Geschwind (1970), among others, suggested a much earlier age.
- Stephen Krashen (1973) cited research to support the completion of lateralization around age five. Krashen's suggestion does not grossly conflict with research on first language acquisition if one considers "fluency" in the first language to be achieved by age five. Scovel (1984: 1)

cautioned against assuming, with Krashen, that lateralization is *complete* by age five. "One must be careful to distinguish between 'emergence' of lateralization (at birth, but quite evident at five) and 'completion' (only evident at about puberty)." If lateralization is not completed until puberty, then one can still construct arguments for a critical period based on lateralization.

### **Biological Timetables**

#### ***Scovel:***

One of the most compelling arguments for an accent-related critical period came from Thomas Scovel's (1988) fascinating multidisciplinary review of the evidence that has been amassed.

Scovel cited evidence for a sociobiological critical period in various species of mammals and birds.

Scovel's evidence pointed toward the development of a socially bonding accent at puberty, enabling species to:

- a. form an identity with their own community as they anticipate roles of parenting and leadership,
- b. attract mates of "their own kind" in an instinctive drive to maintain their own species.

If the stabilization of an accepted, authentic accent is biologically preprogrammed for baboons and birds, why not for human beings?

Scovel argues that (1988, cited in Brown, 2000, p. 56) "an accent emerging after puberty is the price we pay for our preordained ability to be articulate apes."

#### ***Walsh & Diller:***

Following another line of research, Walsh and Diller (1981, cited in Brown, 2000, p. 56) concluded that different aspects of a second language are learned optimally at different ages:

- Lower-order processes such as pronunciation are dependent on early maturing and less adaptive macroneural circuits, which makes foreign accents difficult to overcome after childhood.
- Higher-order language functions, such as semantic relations, are more dependent on late maturing neural circuits.

This conclusion lends support for a neurologically based critical period, but principally for the acquisition of an authentic (nativelike) accent, and not very strongly for the acquisition of communicative fluency and other "higher-order" processes.

### Right-Hemispheric Participation

Another branch of neurolinguistic research focused on the role of the right hemisphere in the acquisition of a second language.

#### ***Obler:***

Obler (1981, cited in Brown, 2000, p. 58) noted that in second language learning, there is significant right hemisphere *participation* and that "this participation is particularly active during the early stages of learning the second language".

But this "participation" to some extent consists of what is defined as "strategies" of acquisition.

Obler cited two examples of right hemisphere activity:

- the strategy of guessing at meanings
- the strategy of using formulaic utterances

#### ***Genesee & Seliger:***

Genesee (1982) and Seliger (1982) also found support for right hemisphere involvement in the form of *complex language processing* as opposed to early language acquisition.

Genesee (1982, cited in Brown, 2000, p.57) concluded that "there may be greater right hemisphere involvement in language processing in bilinguals who acquire their second language late relative to their first language and in bilinguals who learn it in informal contexts."

While this conclusion may appear to contradict Obler's statement above, it does not.

Obler found support for more right hemisphere activity during the early stages of second language acquisition, but her conclusions were drawn from a study of seventh-, ninth-, and eleventh-grade subjects-all postpubescent.

**Such studies seem to suggest that second language learners, particularly adult learners, might benefit from more encouragement of right-brain activity in the classroom context.**

But, as Scovel (1982: 324-325) noted, that sort of conclusion needs to be cautious, since the research provides a good deal of conflicting evidence, some of which has been grossly misinterpreted in "an unhappy marriage of single-minded neuropsychologists and double-minded educationalists .... Brain research ... will not provide a quick fix to our teaching problems."

### Anthropological Evidence

Some adults have been known to acquire an authentic accent in a second language after the age of puberty, but such individuals are few.

Anthropologist Jane Hill (1970) provided a response to Scovel's (1969) study by citing anthropological research on non-Western societies that yielded evidence that adults can, in the normal course of their lives, acquire second languages perfectly.

One unique instance of second language acquisition in adulthood was reported by **Sorenson (1967)**, who studied the **Tukano culture of South America**. At least two dozen languages were spoken among these communities, and each tribal group, identified by the language it speaks, is an exogamous unit; that is, people must marry outside their group, and hence almost always marry someone who speaks another language. Sorenson reported that during adolescence, individuals actively and almost suddenly began to speak two or three other languages to which they had been exposed at some point. Moreover, "in adulthood [a person] may acquire more languages; as he approaches old age, field observation indicates, he will go on to perfect his knowledge of all the languages at his disposal" (Sorenson 1967: 678).

Hill (1970, Brown, 2000, p. 57-58) suggested that

the language acquisition situation seen in adult language learners in the largely monolingual American English middle class speech communities ... may have been inappropriately taken to be a universal situation in proposing an innatist explanation for adult foreign accents. Multilingual speech communities of various types deserve careful study .... We will have to explore the influence of social and cultural roles which language and phonation play, and the role which attitudes about language play, as an alternative or a supplement to the cerebral dominance theory as an explanation of adult foreign accents.

*Important points to consider:*

Hill's challenge was taken up in subsequent decades. Flege (1987) and Morris and Gerstman (1986), for example, cited motivation, affective variables, social factors, and the quality of input as important in explaining the apparent advantage of the child. However, both Long (1990b) and Patkowski (1990) disputed such conclusions and sided with Scovel in their relatively strong interpretation of an age-related critical period for first and second language acquisition.