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Three Misconceptions about Age and L2 Learning

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Overview

* The concept of critical period

-> It's generally accepted among psychologists that a critical period for L1 acquisition exists, but controversy arises when the critical period claim is extended to L2 learning.

* Previous studies on critical period

-Penfield & Roberts (1959) : Language acquisition is most efficient before age 9, when human brain becomes... stiff and rigid.

-Lenneberg (1967) : During this period of heightened plasticity, the human brain becomes lateralized, and puberty represents a biological change associated with the firm localization of language processing abilities in the left hemisphere.

-Krashen (1973) - Brain lateralization may be completed by the age of 5

-Lamendella (1977) - 'sensitive period' -> language acquisition might be more efficient during early childhood but was not impossible at later ages. (Today, this term is used interchangeably with 'critical period')

*Case studies supporting the existence of critical period in L1 learning

-> wolf children (Genie in Curtiss,1977),
congenitally deaf children (Chelsea in Curtiss,1989)

In case of SLA, people who have attempted to learn L2 after childhood, found it a

challenging and frustrating task, and achieved only rather low proficiency.

But, this evidence is not sufficient to conclude that critical period for SLA exists.

These two phenomenon seem on first view to be quite similar and to converge to support the credibility of a critical period for language learning, But, the case of children deprived of an L1 and those of L2 learners who encounter obstacles to high-level achievement are different and that the critical period that limits the learning of the first group is irrelevant to explaining the shortcomings of the second.

A careful reexamination of the arguments in support of critical period hypothesis suggest that there are misconceptions among them -> misinterpretation, misattribution, and misemphasis.

The purpose of this article -> to review studies on the critical period in SLA to analyze these misconceptions and to present an alternative view.

1. Misinterpretation

Many people have misinterpreted the ultimate attainment of children in an L2 as proof that they learn quickly and easily.

the opposite examples -> p13 <Table1>

Rivera(1998) - adults' better performance at early stages of phonological acquisition

Genesee (1987) – French immersion program

Krashen, Long,& Scarcella(1979) – 'initial state of L2 learning'

Johnson & Newport (1989) -> study of native speaker of Chinese and Korean who had first been exposed to English either before puberty or after puberty. (Grammatical judgement test)

=> Bialystok and Hakuta (1994) -> reexamined Johnson & Newport's (1989) data and they found age-related effects for only some of the structure and deterioration after age 20.

2. *Misattribution*

An error of misattribution in neurosciences -> 'differences in the location of two languages within the brain or in speed of processing account for differences in proficiency levels and explain the poor performance of older learners.' (Table 2)

- Kim, Relkin, Lee, & Hirsh, (1997) – the localization of languages learned at different age. (the result-> (Snow -> 'the real question about age differences in brain localization is whether it implies anything about behavior or about critical periods.')
- Weber-Fox and Neville (1992, 1996, 1999) – differences between younger and older learners in activation patterns and location of language processing.
 - ⇒ Kim et al. (1997) & Weber-Fox and Neville (1992, 1996, 1999) fail to relate differences in brain activation patterns to differences in target language proficiency and thus are essentially irrelevant to explaining a critical period.
- Willemin and Richardson (1994) – '...the different localization of L1 and L2 cannot account for poorer knowledge of one of the languages.'
(experiment -> the relation between degree of lateralization of the two languages in bilinguals' brain and their L2 proficiency
result -> no relationship between proficiency in the L2 and hemisphere involvement)
- Furtado & Webster (1991)
->It seems that any difference in proficiency in an L1 or L2 cannot be attributed to the different localization of the two languages in a bilingual brain.

Another research in neurobiology => the process of **myelination** as a factor in limiting plasticity and thus perhaps determining the critical period.

- Pulvermuller and Schmann (1994)

3. *Misemphasis*

Enormous emphasis on unsuccessful adult L2 learners and ignoring the older learners who achieve nativelike L2 proficiency.

Many studies have shown that whereas younger learners tend to perform fairly similarly to one another, older learners show great variation in their proficiency. (Asher & Garcia, 1969; Birdsong, 1992;.....)

A recent study by Johnson, Shenkman, Newport, and Medin (1996) -> reported age differences but made no mention of the degree of variation among the older learners tested.

*Birdsong (1992) -> 'it is important to study the most advanced adult L2 learners in order to understand the factors that contribute to an adult's success in an L2.'

1) *Problems in Testing*

- standard pronunciation, spontaneous speech / reading aloud, imitation task
written task

Bialystok and Hakuta (1994)

2) *The role of Environment*

3) *The role of Motivation*

examples) two native speakers of English who had achieved nativelike proficiency in Arabic.

=> Their success in L2 learning was attributed to their high degree of motivation to learn the language, their exposure to naturalistic environment, and their conscious attention to grammatical form.

Conclusion & Implication

Age does influence language learning, but primarily because it is associated with social, psychological, educational, and other factors that can affect L2 proficiency, not because of any critical period that limits the possibility of language learning by adults.

We see the work reviewed in this article as relevant to three crucial areas of language policy and teaching practice.

- 1) Foreign Language Teaching in the Early Grades
- 2) Bilingual Education
- 3) L2 teaching