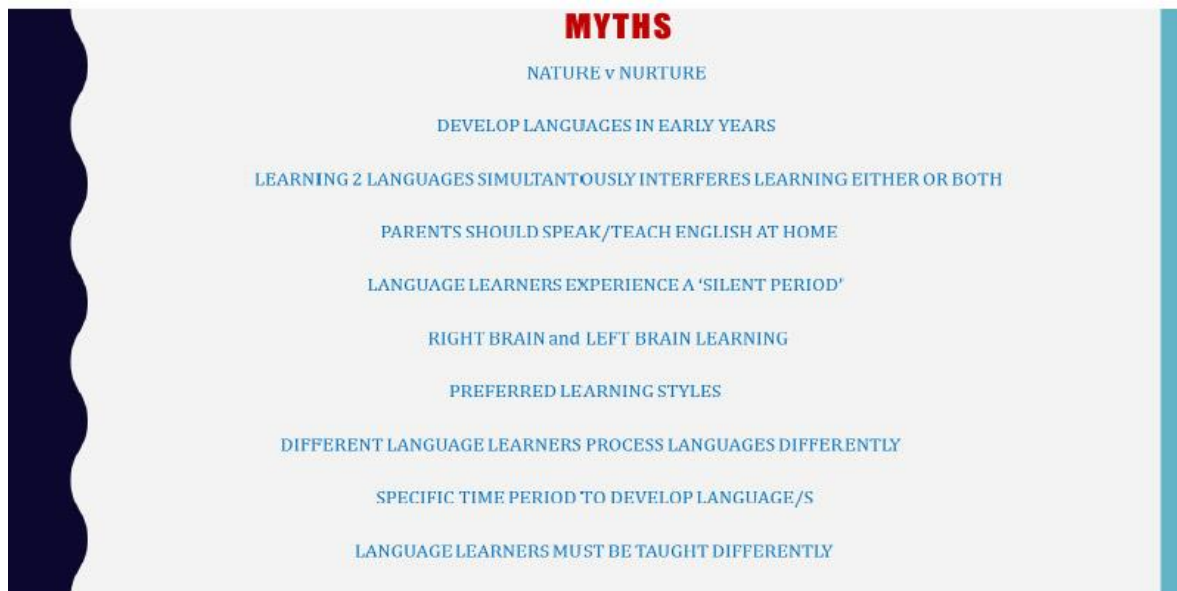


Dual Language Schools Myth Busters in Dual Language Learning

by: Kathleen Leos



Effective teachers are key to the academic success of dual language learners. Yet, developing multiple languages and educating DLLs is fraught with misconceptions. Many myths permeate how multiple languages are acquired. Neuroscience dispels often long-held beliefs to dual language acquisition and literacy development which will require rethinking 'teaching and learning' in the 21st century. In this article, we will look at myths in the dual language field, and correct them with facts for more effective views on dual language education.

MYTH AND FACTS

NATURE V NURTURE

LANGUAGE BEGINS AT BIRTH.

No, language formation begins in the womb, the last ten weeks of gestation. Brains of pre-born infants develop internal neural structures for language which is enhanced when parents speak, play music, and read to the child during pre-natal development. Once born, parents and caregivers nurture language neural pathways by actively interacting with babies' gestures and babbling. Regions of the brain pre-disposed for acquiring languages (nature) must be directly developed (nurture) once a child is born.(1)

DEVELOP LANGUAGES IN EARLY YEARS

Children are sponges.

No, although ages 0-17 are usually considered optimal 'windows of opportunity' for language learning, developing multiple languages, at any age, increases executive function and delays the onset of Alzheimer's and dementia about 4-5 years. Brain

‘neuroplasticity’ demonstrates the brain is not static. It is flexible and continually adapts to new input from the environment, experience and culture throughout our lifetime.(2)

LEARNING TWO LANGUAGES SIMULTANEOUSLY, INHIBITS LANGUAGE DEVELOPMENT

Learning more than one language simultaneously; interferes in developing either or both.

No, children are born universal linguists. They hear every sound uttered throughout the universe from birth to nine months old. At nine months to one year, a child begins to recognize sounds uttered by the mother. If more than one language is spoken in the home, the child accurately discriminates between both languages. fMRI research illustrates that in dual language households, brains develop a ‘bilingual brain map’ for language and comprehension. Learning two languages, simultaneously, increases neural function and cognitive capacity in both without interfering in the development of either language.(3)

PARENTS SHOULD SPEAK ENGLISH AT HOME

No, dual language development is dependent on hearing distinct sound differences among languages. A parents’ role is to facilitate primary language learning at home. Since, dual language learners acquire two languages equally based on the ability to discreetly hear and differentiate sound variations; it is incumbent on parents to clearly articulate and teach the sounds, words and phrases in the primary language. Developing languages within a social environment establishes a solid foundation for learning. (4)(5)

DUAL LANGUAGE LEARNERS EXPERIENCE A ‘SILENT PERIOD’

No, fMRI brain scans reveal the brain is continually active during language and literacy development. Students are engaged in learning at all times whether listening, speaking, reading, writing or thinking. Since learning depends on language and brains are never ‘silent’, it is important to organize a ‘teaching and learning’ environment which encourages using all aspects of language throughout the day.(6)

RIGHT-BRAIN AND LEFT-BRAIN LEARNING

No, the whole brain is engaged during dual language and literacy development. Although, language acquisition is more centralized in a specific area of the brain; ongoing dual language and reading development activate multiple neural regions. Since dual language learning depends on phonological processing, visual stimulation, object identification, recall, and memory, the ‘whole brain’ is involved.(7)

STUDENTS/DLLS HAVE PREFERRED LEARNING STYLES

No, learners do not have sensory learning preferences such as auditory, visual, or kinesthetic. The entire body, brain and FIVE senses are involved in the learning process. Learning environments must cultivate a ‘whole student’ approach to learning through productive verbal, physical, and sensory interaction. Dual language development thrives in open, flexible learning spaces that support inquisitive input with interactive output within academic content, standards-based expectations, and requirements.(8)

LANGUAGE INSTRUCTION CHANGES DEPENDING ON THE LANGUAGES SPOKEN

No, the language development process is universal. Typical language development adheres to the same neurological procedure regardless of the language. Three brain pathways organize language: What—what you hear; Where—from where you hear the sound; How—how you hear, scramble, and organize sound from visual imagery to concept. This type of language processing forms the basis of reading and cognition.(9)

SPECIFIC PERIOD OF TIME TO LEARN LANGUAGES

No, there is no empirical neuroscience research delineating a specific period of time to attain proficiency in acquiring multiple languages. “Bilingual children acquire language on the same timetable as monolingual children, largely because this timetable is determined by the process of cognitive development.”(10) The length of time required to attain proficiency depends on many factors: the teachers’ expertise in language development, the learning environment, prior experiences of the learner, language education program, expectations, consistency, what is taught, how, and by whom.

DUAL LANGUAGE LEARNERS MUST BE TAUGHT DIFFERENTLY

No, language is the key to reading, comprehension, and communication. Dual language learning is a complex process that is accomplished by understanding how brains acquire language/s and knowledge simultaneously. Universally, individuals process language/s similarly. TEACHING all aspects of language such as grammar, structure, comprehension, and language production as well as listening, speaking, reading, and writing integrated with grade-level academic content in one or more language is necessary for all students to succeed. The instructional approach for DLLs is the same as for all students.(11)

In this article, ENF (Education Neuroscience Foundation) presents recent education neuroscience findings pertaining to dual language and literacy development for DLLs. We hope the information motivates educators to examine instructional practice and learning environments for DLLs and all students. Future articles will include instructional strategies that accompany these concepts. In the meantime, enjoy the new school year!

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Resource for Parents Teaching Primary Language at Home and in the Community

Early Childhood Learning and Knowledge Center; Head Start: Language at Home and in the Community for Families [PDF, 1.0MB] August 2019: <https://eclkc.ohs.acf.hhs.gov/>

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