“A” is not only for Apple: Developing Cognitive Flexibility Through Early Accessible Language Instruction using a Bilingual Approach

Kristin A. Di Perri, Ed.D.

EHDI Conference 2010

Chicago, IL

What is the issue?

- Often deaf children have to “wait” until they have sufficient English skills before performing academic tasks.
- This ‘waiting’ for language to develop can have serious ramifications on overall linguistic and cognitive development.

Medical View of Deaf Children

Hearing loss is a medical need to be “fixed”.The solution is a cochlear implant with intensive oral/aural training.

Minimal understanding of language development that is pertinent to deaf children to help guide parents in making reasonable decisions.

Parents are led to believe that a choice exists between ‘oral only’ or ‘ASL’ making it a “zero sum game”.

A review of the major implantation facilities show no related links or discussion about ASL as a viable entity.

Linguistic/ Cognitive View of Deaf Children

- Language can develop through auditory and visual channels depending on the child.
- One language does not prohibit the development of another.
- ASL provides **100%** access to visual language from birth. The nature of hearing loss precludes **100%** access to auditory/oral channels from the start.
- ASL linguistic tasks allow the very young deaf child to develop cognitive abilities without “waiting” for enough English to develop.

Brain Neurology and the Acquisition of Language

Like spoken languages there is a critical time for learning ASL

The implications underscore the need for early exposure to ASL in order for appropriate development of the neural systems.

Learning ASL after puberty results in less hemispheric activity in the brain (both right and left areas) when viewing ASL.

Further "…children who are not exposed to any language before puberty, or perhaps sooner, are unable to fully acquire and use the principles of language." (University of Washington, 2002)

Critical Period Hypothesis

Professional staff involved with the needs of a deaf child are generally very aware that “time is of the essence” in regards to decisions made about the child’s language options.

Parents are often frustrated by conflicting messages they hear. The most egregious is that exposure to ASL will somehow “harm’ the child’s developing language abilities when in fact the converse is true.

Young hearing children and language development

From birth, hearing children naturally acquire the phonology, syntax and vocabulary of the language used around them. Cognition and understanding about how language “works” is also being developed

Examples:

(12 months) aware of social value of speech

(24 months) words combined into short sentences

(36 months) able to reason out many questions

(Age 4-5 years) able to “play” with the parts of the language in a cognitively astute manner.

Typical linguistic tasks hearing children do

In Preschool/Kindergarten hearing children begin to perform more sophisticated tasks related to their language. These tasks develop their meta- linguistic and cognitive abilities.

For example:

- Phonemic manipulation (identifying, blending, segmentation)
- Rhyming, word families
- Alphabetic principle

The “Challenge” with Deaf Children

Among the majority of deaf children there can typically be a time of “waiting” for language to develop.This waiting compromises the developmental processing that enables them to make appropriate cognitive and linguistic connections to their world.This waiting can often extend well into the elementary years.

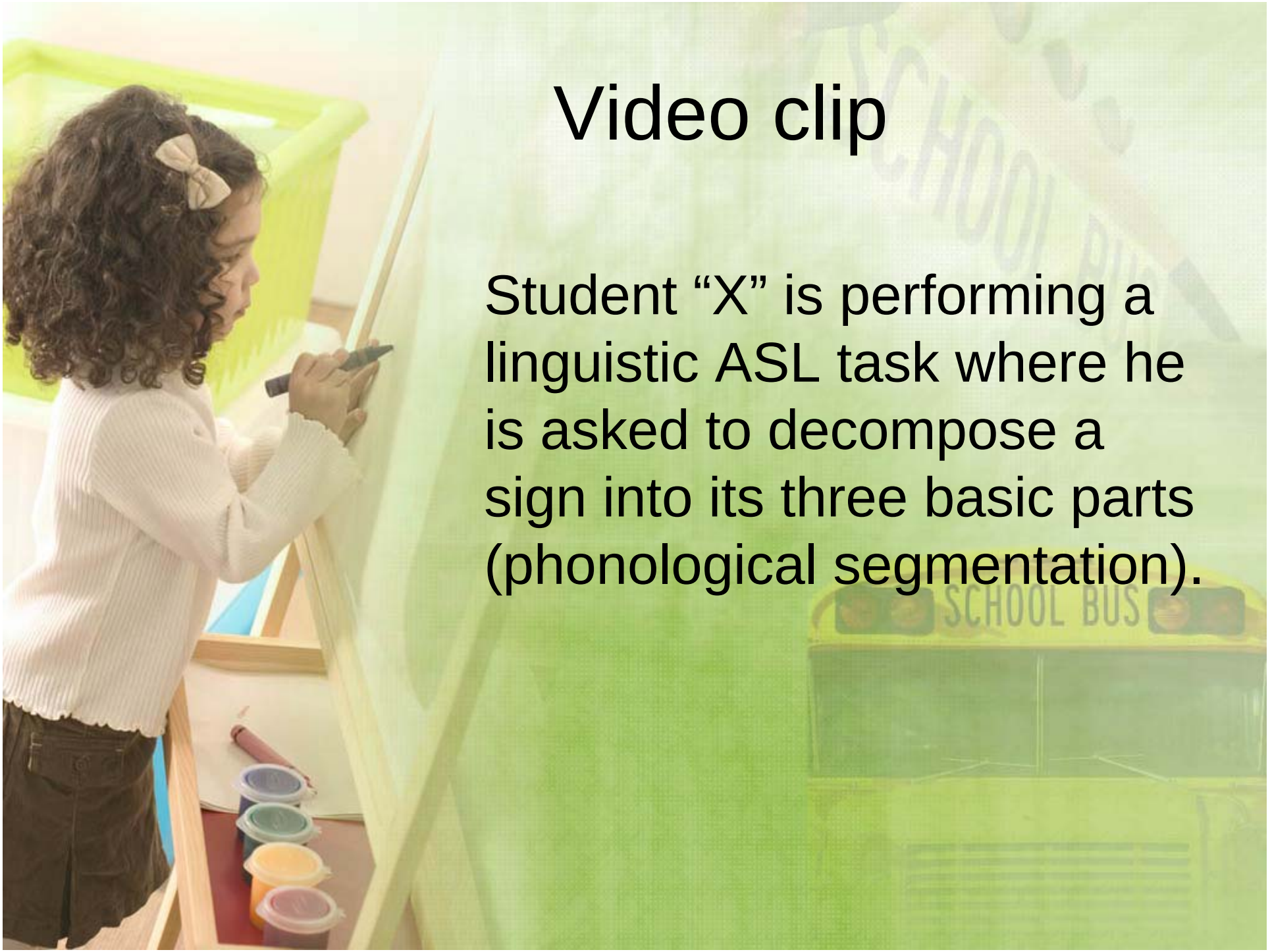
Access to comprehensible language from birth

- Allow, support and encourage your child to fully develop ASL from the very beginning.
- Understand that bilingualism (ASL and English) is a positive rather than a negative thing.
- Cognitive abilities are enhanced through the process from the beginning thus maximizing effects of the critical period.

How does ASL in the early years promote cognitive growth?

- Rather than waiting, the deaf child is expected to manipulate cognitive\linguistic tasks in the same way a hearing child does by using a language for which he has had comprehensible access.

- Dissertation- found that children ages 4-8 were overwhelming able to manipulate the basic phonological categories of ASL (Handshape, Location and Movement) through a myriad of linguistic tasks



Video clip

Student “X” is performing a linguistic ASL task where he is asked to decompose a sign into its three basic parts (phonological segmentation).

Preschool Tasks for developing linguistic and cognitive connections

ASL Phonology:Handshape, Location, Movement

Example of tasks:

- **Identification**-given a sign, indicate which handshape is being used
- **Categorization**- given several signs, provide a common location across signs
- **Segmentation**-given a sign, provide components used (HS, LOC, MOV)
- **Blending**- given three components of a sign combine together in to a sign (e.g. HS="X", LOC-side of mouth, MOV= twist =APPLE)

Hierarchy for Task Arrangement

Development of tasks takes into consideration linguistic development. Goals and objectives developed for pre/K deaf children are age and linguistically appropriate. For example:

GOAL: The student will demonstrate receptive and expressive knowledge of the 5 basic ASL Locations: top half of head, bottom half of head, chest, torso, arm, neutral).

Some objectives:

Given a real object (e.g. apple) the child will make the sign and place the object in the appropriate space on the Location Poster placed on the floor.

Indicating a location on the body, the child will provide own sign or one from several items prompts.

Given 5 items (representing the 5 locations) the student will place the objects on the Location Poster (on floor).

Video clip

- Young deaf child working on identifying ASL handshapes through various tasks.

Contact Information

Kristin Di Perri, Ed.D.
RR 1 Box 407
Falls, PA
18615

Email: halimun@aol.com