



RMTCD/HH

Resource Materials and Technology Center for the Deaf and Hard of Hearing

We're Not Just Growing Language, We're Growing Brains!

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RMTTC-D/HH

Resource Materials and Technology Center for the Deaf and Hard of Hearing

Working Collaboratively to Support the Education of Students who are Deaf/Hard of Hearing in Florida

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Florida School for
the Deaf & the Blind

Do More. Be More. Achieve More.

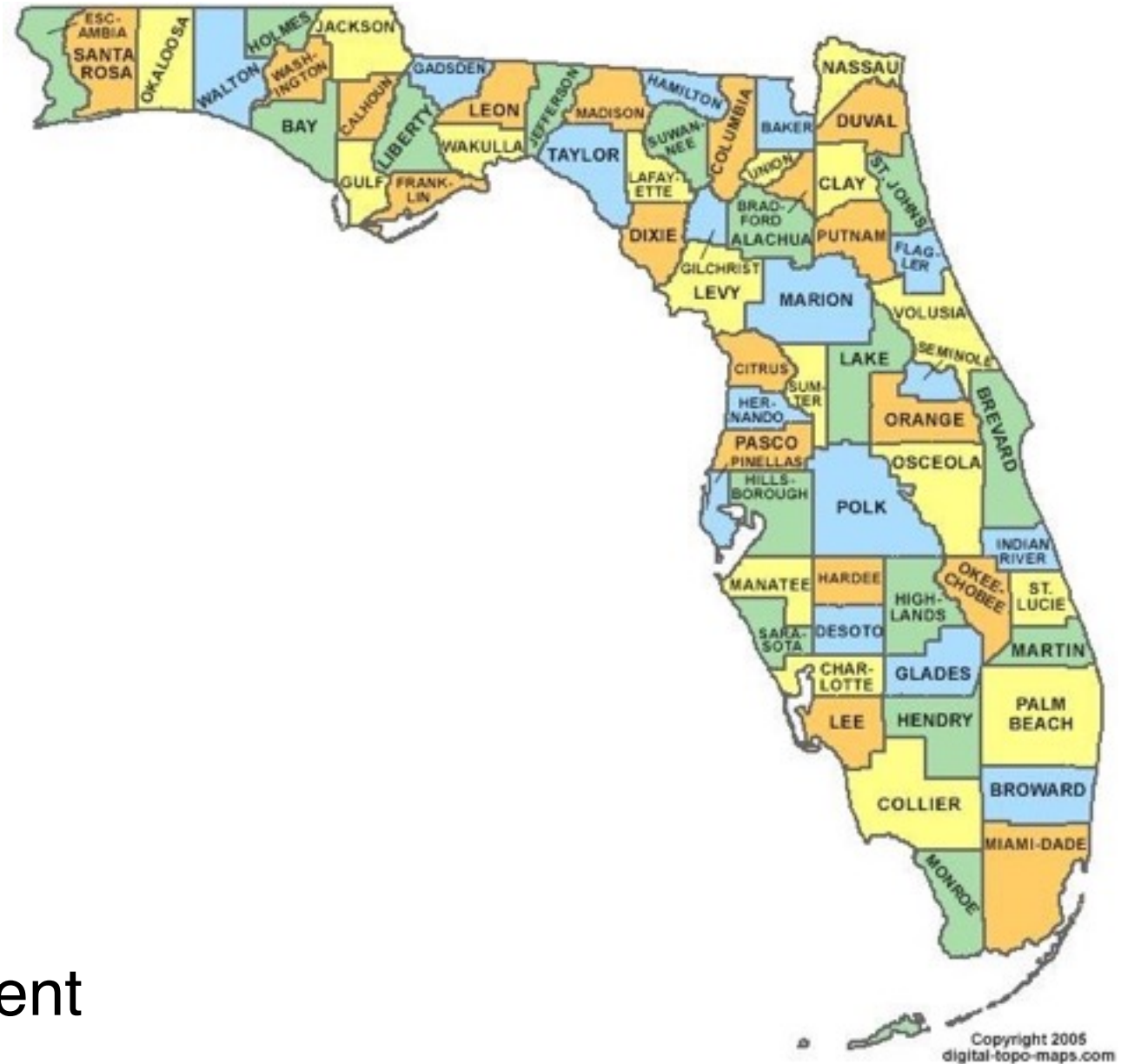


FREE SERVICES **Available by REQUEST to:**

- School District Staff
- Teachers
- Parents
- Other Professionals

Services Provided:

- Trainings & Professional Development
- Assessments & Evaluations
- Consultation, Information, & Referral
- Resources & Materials





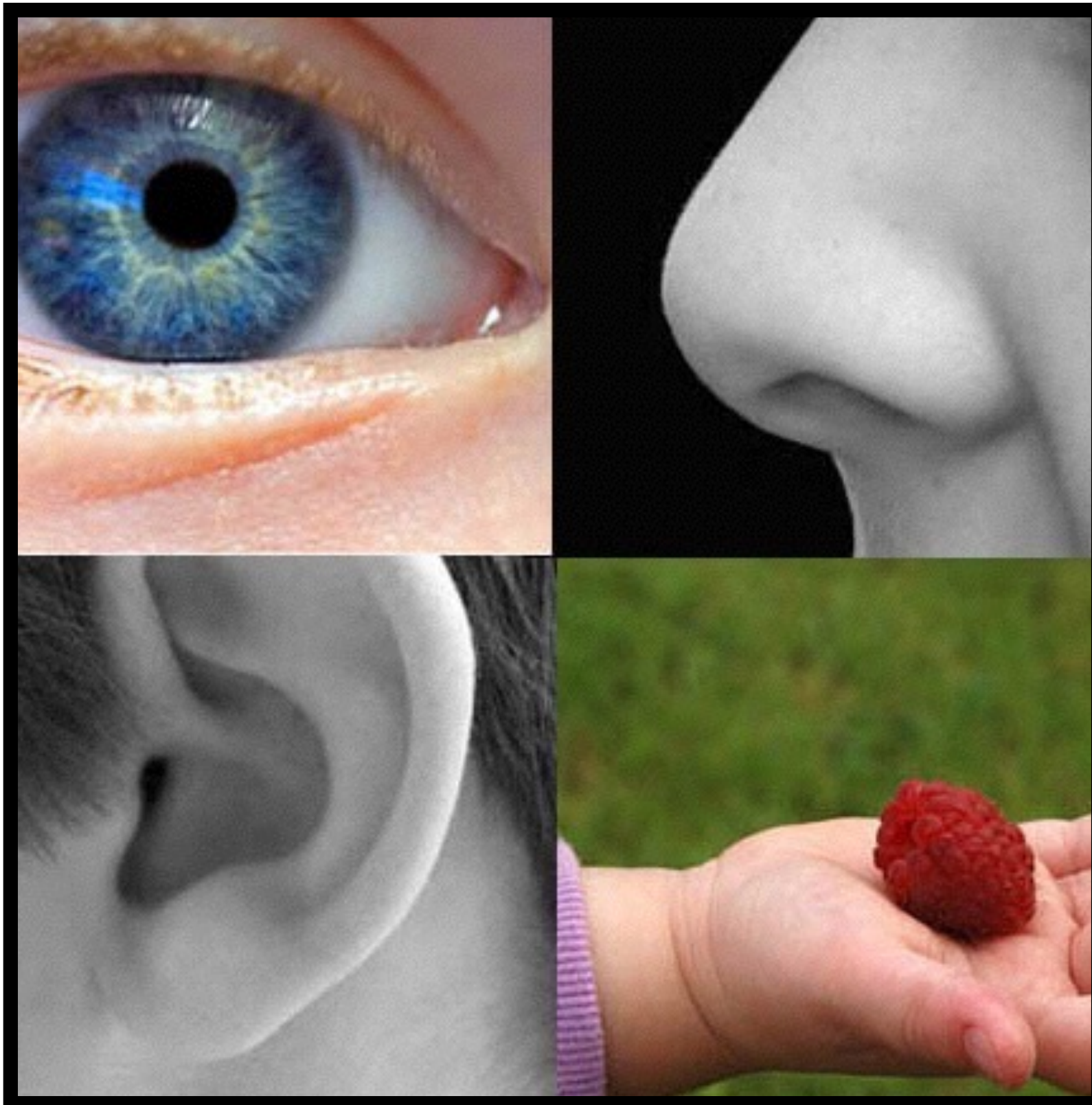
Objectives:

Participants will

Describe the relevant research related to language development for students who are Deaf.

Explain at least two ways the research is currently impacting the education of students who are Deaf.

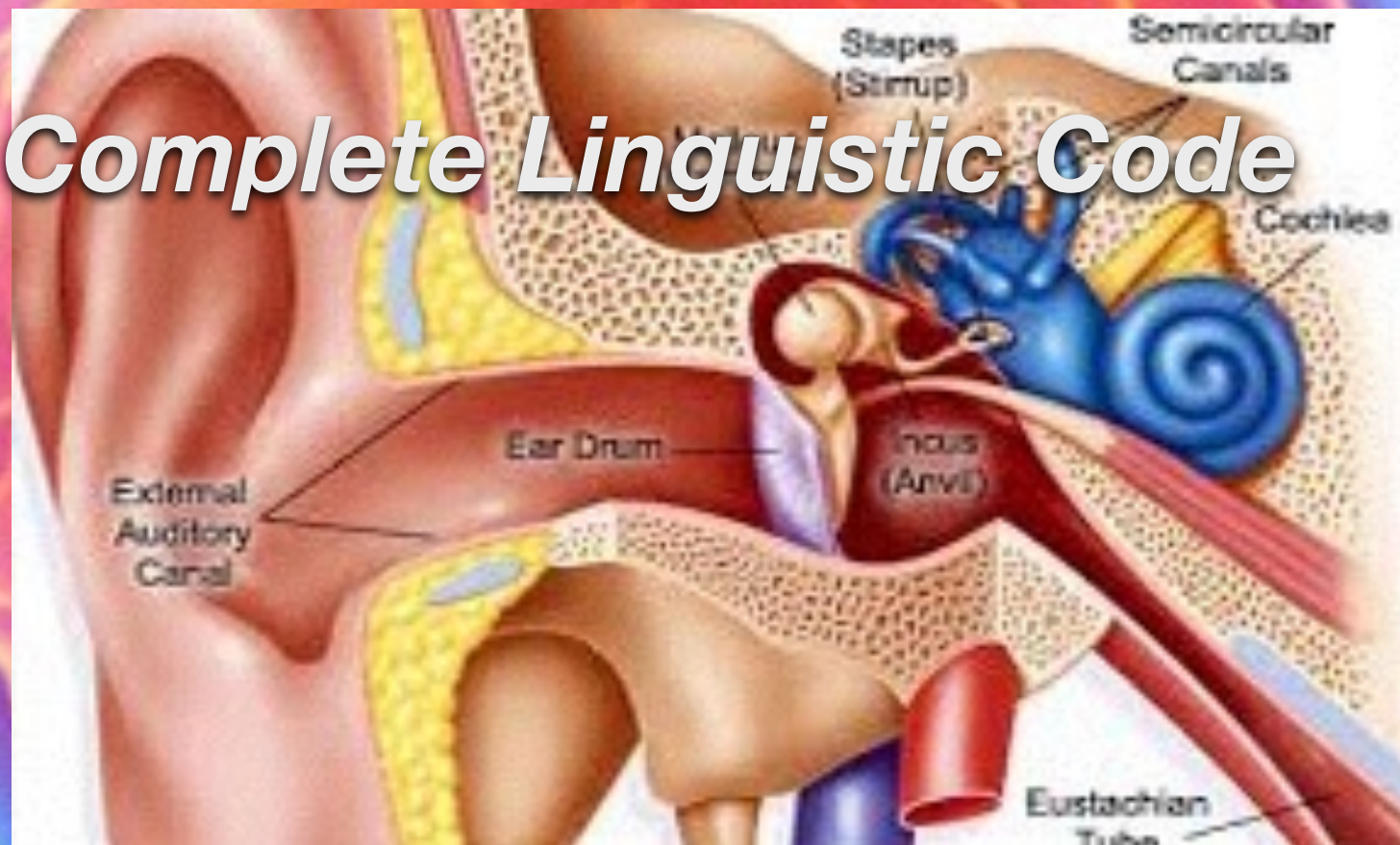
List more than one resource to obtain further information related to visual language and visual learning.



Language Learning Experience

(Marschark & Hauser, 2012)

Complete Linguistic Code





What is language?



(VL2 Research Brief #9, 2013)



Studies in neuroscience confirm that the brain has the ability to learn **both** visual and spoken languages.

Learning both a visual and a spoken language **does not harm** the development of either language.

There is no risk in learning a visual language but there are risks in not providing adequate access to language.

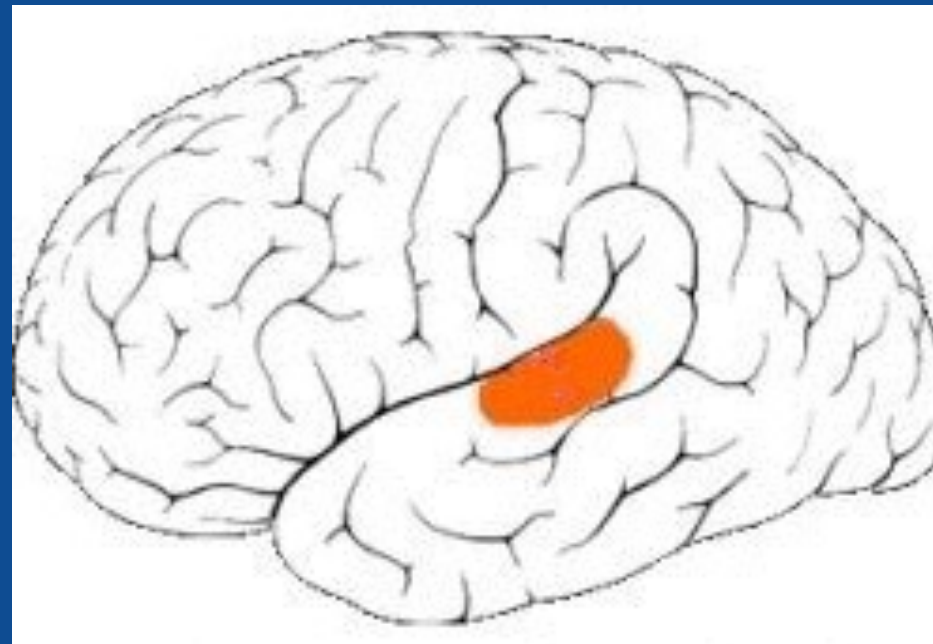


Spoken language outcomes are unpredictable for all children who are DHH, there is a risk of language delay if an accessible, visual language is not used as EARLY as possible.

Sign language DOES NOT interfere with deaf children learning to speak. Early sign language has beneficial effects on learning a spoken language for children with and without cochlear implants

The acquisition of a signed language can actually support the learning of a spoken language.





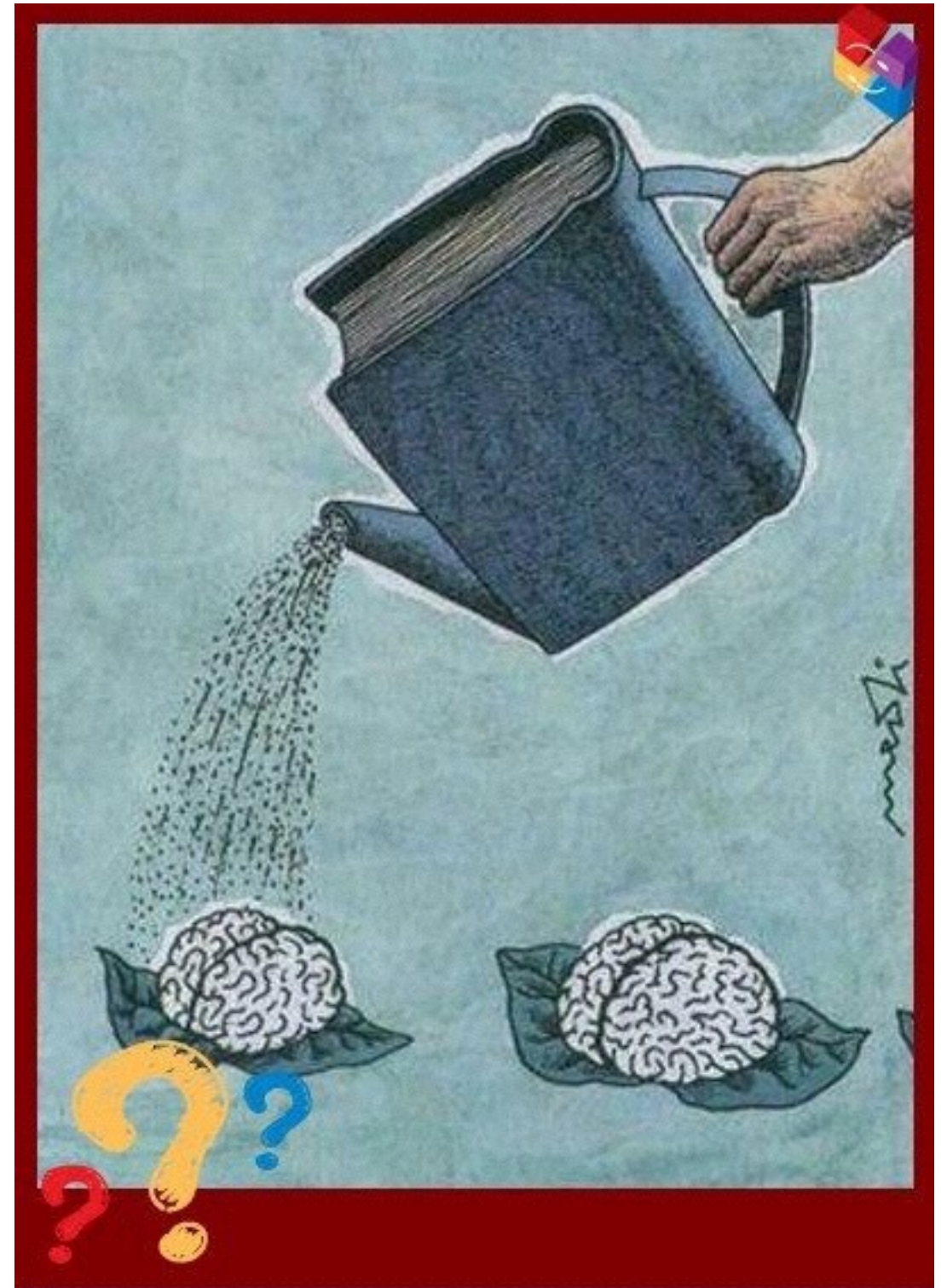


sound and sign are biologically equivalent in the human brain

(Petitto, Stone, Andriola, Kartheiser, & Cochran, 2016)



What will foster brain growth?





Impact Language Development



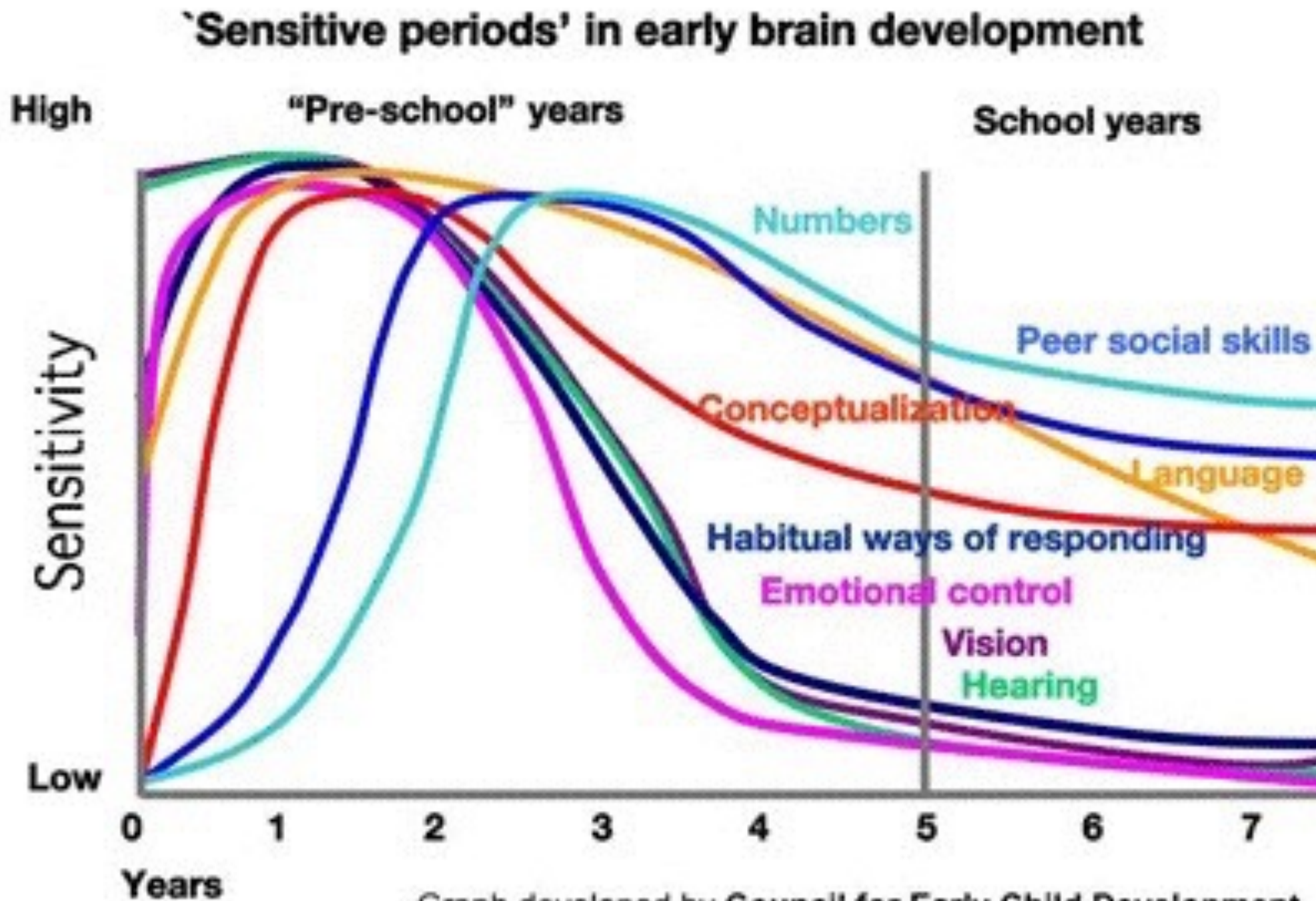
**1: CRITICAL TIME PERIOD
FOR LANGUAGE
LEARNING**

**2. PARENTAL
INVOLVEMENT**

**3. LANGUAGE RICH
ENVIRONMENTS**



#1 Critical Time Period





Infants and Toddlers



(Mayberry, 1993; VL@ Research Brief #2, 2011; MARSCHARK & HAUSER, 2012)



Three - Seven Years Old



(Knors & Marschark, 2012; NAD Position Paper, 2014; Petite, 2009; Marschark & Hauser, 2012)



“Language acquisition that starts at age three or four is not natural.”

-Marschark & Hauser, 2012-





#2 Parental Involvement



(Laurent Clerc Center, 2015)



(Laurent Clerc Center, 2015; Marschark & Spencer, 2009; Petitto, 2009; VL2 Research Brief #4, 2011)



PARENT INVOLVEMENT

in their child's education

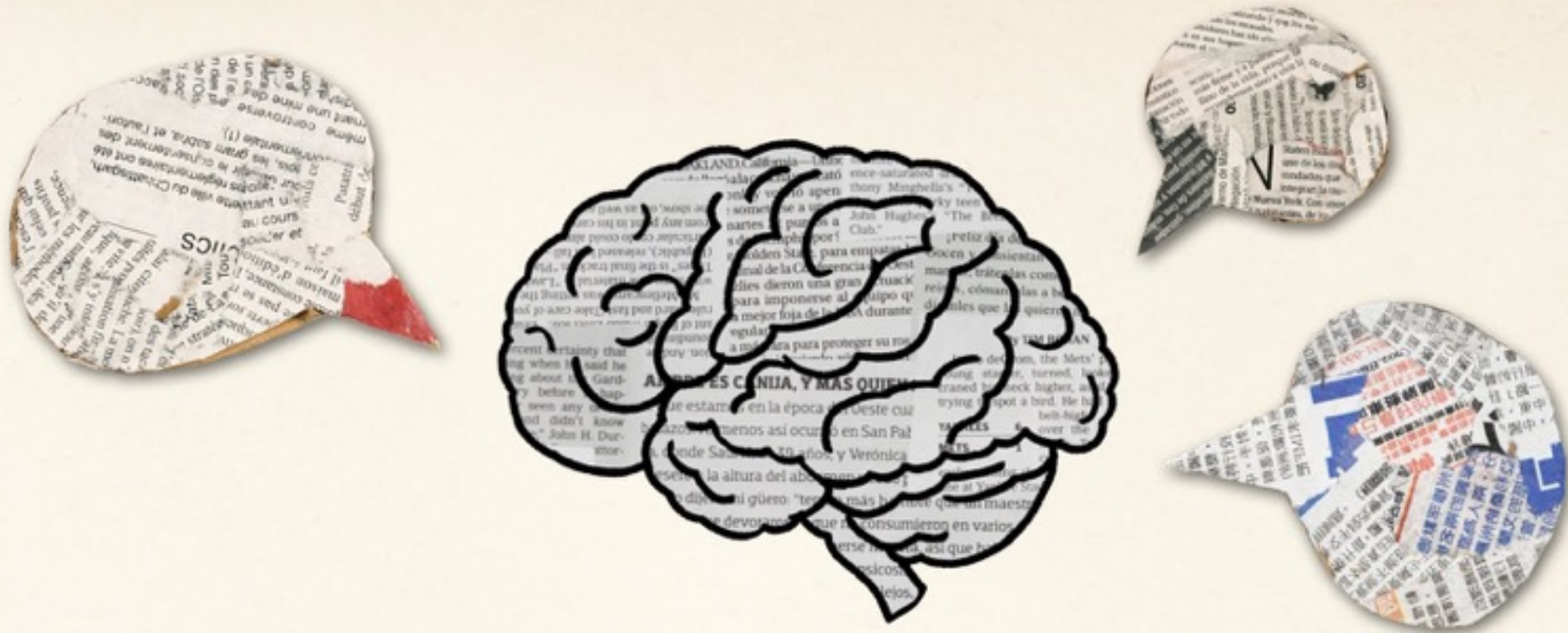


#3 Language Rich Environment

accessible

interactive

abundant



**the benefits of
a bilingual brain**



Benefits of Bilingualism



achieve developmental milestones on time

promotes language and literacy development

promotes cognitive flexibility



What is the ripple effect of the research findings?



Deaf Education Teacher
Training Programs with a
Bilingual Focus

ASL/English Bilingual
Education Programs

ASL/English Bimodal
Bilingual Programs



Deaf Education Teacher Training Programs with a Bilingual Focus



UC San Diego





ASL/English Bilingual Education Programs



ASL

Promoted as a first language and used as the medium of instruction and communication.

English

Addressed primarily through reading and writing



ASL/English Bimodal Bilingual Programs



Traditional ASL & English
Bilingual Program

+ with +

Additional strategies and
opportunities for children to
develop and use spoken
language commensurate
with their oral ability



Research Briefs

 VISUAL LANGUAGE & VISUAL LEARNING
RESEARCH BRIEF: 

THE IMPORTANCE OF FINGERSPELLING FOR READING
JULY 2010



LEARNING FROM RESEARCH #1

Key Findings on the Importance of Fingerspelling for Reading:

- Deaf families fingerspell to their deaf children when they are very young.
- Early exposure to fingerspelling helps these children become better readers.
- Fingerspelling, reading, and writing are intertwined.
- Fingerspelling facilitates English vocabulary growth, and, longer the lexicon, the better new vocabulary is learned.
- Fingerspelling positively correlates with stronger reading skills. Deaf and hard-of-hearing children who are good fingerspellers are good readers, and vice versa.

Written by:
Sharon Baker, Ed.D.

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 VISUAL LANGUAGE & VISUAL LEARNING
RESEARCH BRIEF: 

READING RESEARCH & DEAF CHILDREN
JUNE 2011



Key Findings on Reading Research and Deaf Children:

LEARNING FROM RESEARCH #4

- Early diagnosis and intervention support better reading outcomes.
- A strong language foundation (regardless of the language or modality) is important for reading success.
- Parental fluency in the language or communication mode of the child is critical.
- Parental involvement in the child's academic environment is important for academic success.
- In order to read, a child must develop word recognition, and there are multiple routes for reading and its meaning.
- In developing advanced reading skills, phonology appears to be important for some, but not all, deaf children.
- Phonological coding and awareness skills are a low-to-moderate predictor of reading achievement in deaf individuals.
- Deaf children with deaf parents tend to have an enriched language environment. In consequence, deaf children of deaf parents tend to read better, but given consistent and rich language access, deaf children from hearing parents can catch up.

 VISUAL LANGUAGE & VISUAL LEARNING
RESEARCH BRIEF: 

THE IMPLICATIONS OF BIMODAL BILINGUAL APPROACHES FOR CHILDREN WITH COCHLEAR IMPLANTS
JUNE 2012



LEARNING FROM RESEARCH #6

Key Findings:

- For deaf children with cochlear implants, a visual language such as American Sign Language (ASL) can provide advantages for the child's linguistic, communicative, cognitive, academic, literacy, and psychosocial development.
- Studies in neuroscience confirm that the brain has the ability to learn both visual and spoken languages. Furthermore, learning both a visual and a spoken language does not harm the development of either language.
- The development of early competence in a visual language can effectively facilitate a child's spoken language development.
- A bimodal bilingual language and communication approach—which addresses acquisition and use of both a visual and a spoken language—has the potential to foster early language through the child's vision while also stimulating the child's audition through a cochlear implant.
- Interaction with members of the Deaf community can be beneficial for the deaf child as evidenced by identity formation and social emotional development.
- With systematic individualized planning, a rich spoken language environment can be provided within a bimodal bilingual setting.

Written by:
Julie Whitworth
Ph.D.

Debra Berlin Neukirch
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BS, MSSW

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 VISUAL LANGUAGE & VISUAL LEARNING
RESEARCH BRIEF: 

ASL/ENGLISH BILINGUAL EDUCATION: MODELS, APPROACHES, AND STRATEGIES
JUNE 2013



LEARNING FROM RESEARCH #8

Key Points:

1. Early access and exposure to a natural language, whether signed or spoken, initiates the language acquisition process required for literacy development and bilingual competence.
2. In order for a child to benefit from the cognitive advantages of bilingualism, the development of both languages needs to be fostered in all social and academic interactions.
3. Additive bilingualism aims to develop proficiency in two languages.
4. A developmental bilingual program addresses the social and academic language needs of diverse deaf learners while also providing instruction in content areas.
5. Developing competence in two languages requires deliberate and careful planning for the use of the two languages.
6. Effective use of bilingual practices hinges on the planned allocation of the two languages in the classroom.
7. Bilingual teachers base their selection of bilingual practices and strategies on the students' linguistic skills as well as the content at hand.

Written by:
Maribel Gálvez
Ph.D.

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Survey