Neurobiological Development
Lightning Review
Brain development, children with hearing loss, and challenges to learning

Language delays - no L1 or delays in L1
Sensory issues often not addressed - over reliance on objective measures
Emotional immaturity
Emotional dysregulation
Poor self-esteem, strong sense of shame
No sense of self or very critical sense of self
Attachment consequences

- Social isolation
- Negative beliefs about themselves
- Insecure attachment patterns
- Difficulty with self regulation

Learning and teaching are relationship based activities……

Limited direct relationship with the teacher, primary relationship often with the interpreter

- Over protection from adults – thinking for, communicating for, doing for deaf/hoh kids
- Learned helplessness, passivity, low frustration tolerance leads to overwhelm and shutdown

Little or not access to incidental learning

- Delays and gaps in knowledge, Splinter skills
- Inadequate knowledge base to connect new learning
- Illiteracy
Brain development, children with hearing loss, and challenges to learning (continued)

Not school ready, not ready to learn
Curriculums not designed to habilitate learners
Curriculums, teaching methods and assessments not designed for visual, hands-on, and delayed learners

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Brain development, children with hearing loss, and challenges to learning (continued)

Interpreters are not allowed (and/or choose not) to be pivotal to the learning process and an equal member of the educational team
No team
Top down management and decision making versus bottom up
Only evaluated every 3 years
Special educators are responsible for the development, implementation and oversight of the curriculum and instruction but typically have no specialized training with deaf/hoh kids

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Brain development, children with hearing loss, and challenges to learning (continued)

Costs to educate deaf/hoh children effectively…and…we can’t talk about costs, we pretend they are not a factor and that we are actually debating best educational approaches versus avoiding costs
“She can do it but she’s not trying”
“He just wants attention”
“He’s going to be in the hearing world so he has to learn English”
“She can hear us just fine”
“She know this”

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We need to look at ourselves and if we are succeeding or not…
Information Dissemination and students with hearing loss

English/ASL proficiency...Hearing/Deaf Cultural Competence

English Proficient

- Bilingual English/ASL
- No functional first language

ASL Proficient

- Visual gestural "VG"
- Minimal Language Skills "MLS"

Culturally Hearing

- Late Deafened
- Hard of Hearing

Cochlear Implant

- Deaf of Deaf Parents
- Deaf of hearing parent

Oral Deaf

- Prelingually Deaf
- Traditionally Underserved Deaf "TUD"

Hearing Siblings

- Children of Deaf Adults (CODA)

Culturally Deaf

- Deaf of Deaf Parents
- Deaf of hearing parents

Deaf of Deaf Parents

- Culturally Deaf
- Deaf

Deaf of hearing parents

- Culturally Deaf
- Deaf

Visual gestural "VG"

- Minimal Language Skills "MLS"

Hearing/Deaf Cultural Competence

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- ASL Proficient

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Visual gestural "VG"

- Minimal Language Skills "MLS"
Miranda

English/ASL proficiency….Hearing/Deaf Cultural Competence

- English Users – Functional First Language (L1)
  - Bilingual English/ASL
  - No functional first language

- ASL Users – Functional First Language (L1)
  - Visual gestural: "VG"
  - Minimal Language Skills: "MLS"

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  - Traditionally Underserved Deaf "TUD"

Bryce

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Blake

English/ASL proficiency….Hearing/Deaf Cultural Competence

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  - Bilingual English/ASL
  - No functional first language

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  - Visual gestural: "VG"
  - Minimal Language Skills: "MLS"

- Prelingually Deaf
  - Traditionally Underserved Deaf "TUD"
How to improve education for deaf and hard-of-hearing students
Diagnoses

- Medical Model vs Interpersonal Neurobiology (IPNB) view
- Pathological view versus brain view
- Medication vs experience and relationship

Discipline

- the goal of discipline is education, to teach someone to change their behavior
- when you only have a hammer everything looks like a nail
- one size does not fit all
- Fear and punishment cause fear and anger and have limited effectiveness over time

Discipline - continued

- faulty premise and solutions (Do we know what is causing the behavior?)
- the most effective discipline for the short term and long term is relationship based
How to improve education for deaf and hard-of-hearing students

Language development highest priority for language delayed students

Relationship based...pay attention to, support, promote all the relationships in the child’s educational world

Habilitate other delays: social, regulation, knowledge base

Skill development vs. information dissemination

Integrated curriculum to match how the brain is driven to integrate information

High context provides loads of information

Learning activities embedded in the child’s life (i.e., pattern recognition at the grocery store, bank, etc.)

Lessons taken from the child’s direct experiences – from their home, their neighborhood, what they did today

Project learning, hands-on, experiential

Multi-sensory activities to teach and reinforce content rhythms, memory castle, tactile numbers in the sand

Story boards

Narratives, narratives, narratives
How to improve education for deaf and hard-of-hearing students (continued)

Develop Emotional Intelligence
Mindfulness skills training
Executive Function skill development

Attachment, Teaching, and Learning

Love them, have a real relationship with them…

Don’t be a machine waving your hands

Notice your own energy, change yours to change theirs

Attachment, Teaching, and Learning

Recognize what part of their brain they are operating from and help them become more regulated and integrated so they can access learning
Blow up the box

Be the child’s hero, guide, advocate, mentor, teacher, etc… etc…
Curriculum
Toss it...
unless it is...
Promotes language and communication skills....
Relevant to the child’s life, experience, and environments...
lessons have direct application to the skills the child is needing to develop....

Emotional Intelligence
(EQ)

Interpreters need to be...
- teacher
- bridge new learning to child's existing knowledge
- conduct a classroom within a classroom
- neurobiopsychosocial regulators
- parent advisors/advocates
- peer mediators
- social, linguistic, and educational consultants
- advocate
- advisor to administrators (IEP's)
for children with language delays...all learning activities should be geared toward developing language and communication skills....

use of Narrative to tell stories about what the child learned and experienced...narrative helps to consolidate learning...

Incidental Learning

...find what’s missing...assess gaps in language, knowledge, skills,

back up...

Meet the child where they’re at

Remediate

Interpreter’s Roles

Neurobiopsychosocial regulators
Language models, language stimulus
Bridges - socially to others; connect what the child knows and has experienced with the new learning
Advisors and consultants to admin, teachers, parents
Social mediators
Attachment figures (mom, dad, buddy)
find the neuroplastic sweet spot
be mindful of neuroception...is learning safe?

Social isolation
Linguistic and Cognitive delays
Shame
Dysregulation
Dissociation
The emperor is naked…

let’s have the courage to say it…

and the wisdom and innovation to remodel the 747