

Priming Deaf and Hard of Hearing Children for Success with Reading

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PHONEMIC
AWARENESS



VOCABULARY



COMPLEX
SENTENCES



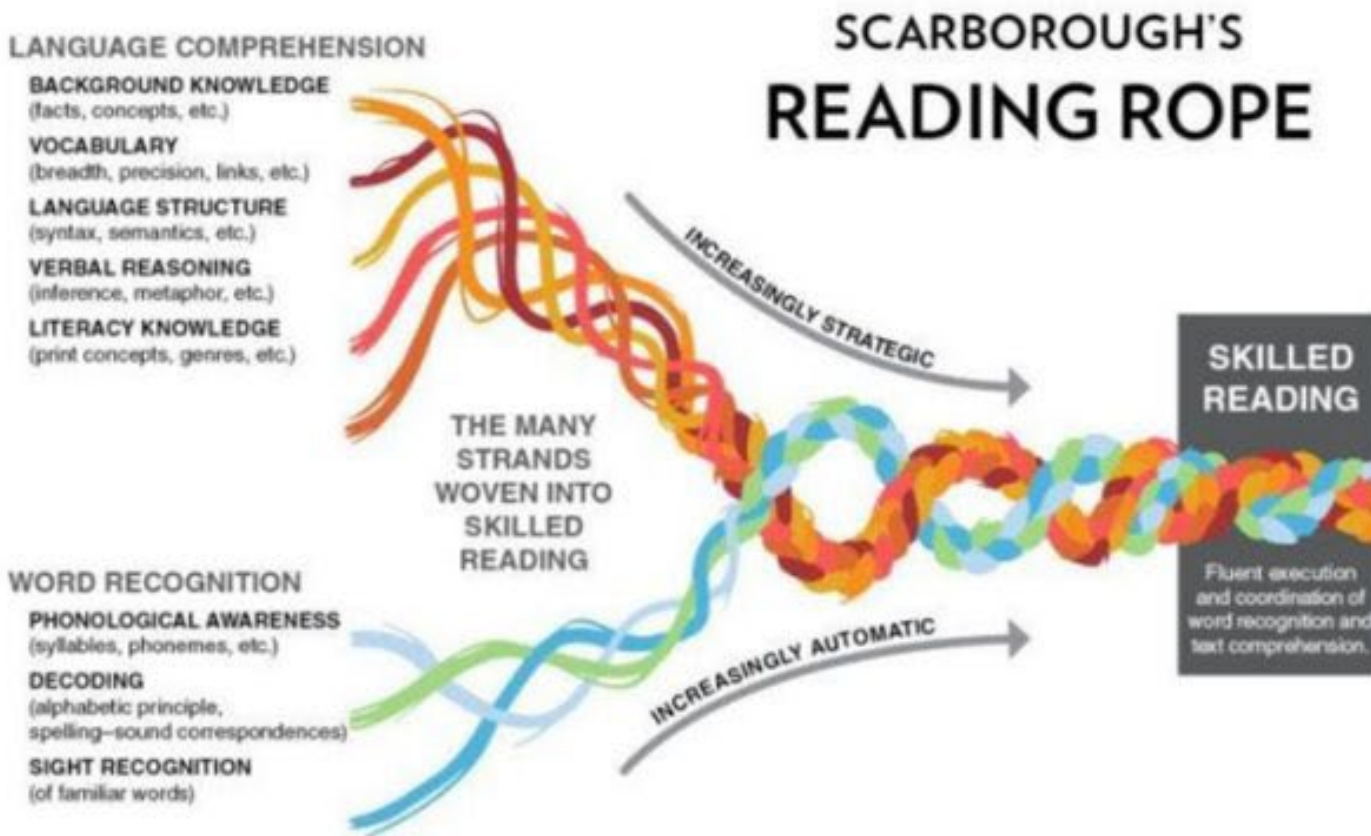
STORY TELLING

Foundations for Success in School

WHAT DOES BRAIN SCIENCE SAY ABOUT HOW A CHILD LEARNS TO READ?

Knowledge
building

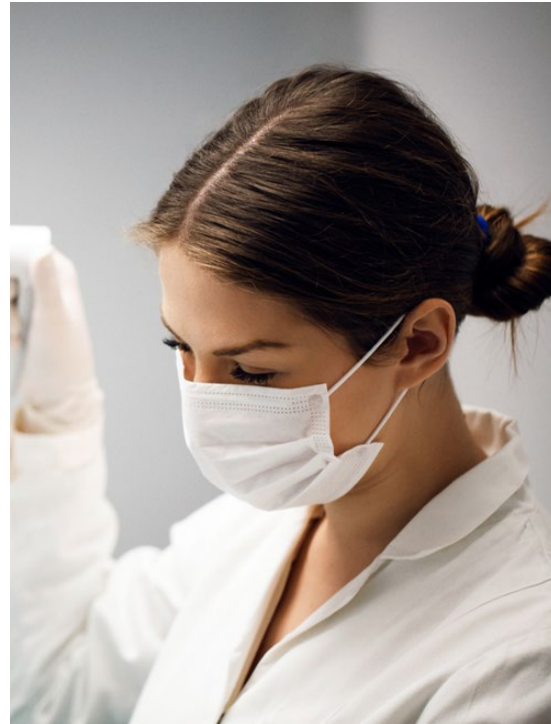
Sounds ->
symbols->
words



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Graphic modeled after the illustration from the *Handbook of Early Literacy Research*, by Susan B. Neuman and David K. Dickinson (2001) who re-envisioned researcher and author Hollis Scarborough's visual metaphor of the Reading Rope.

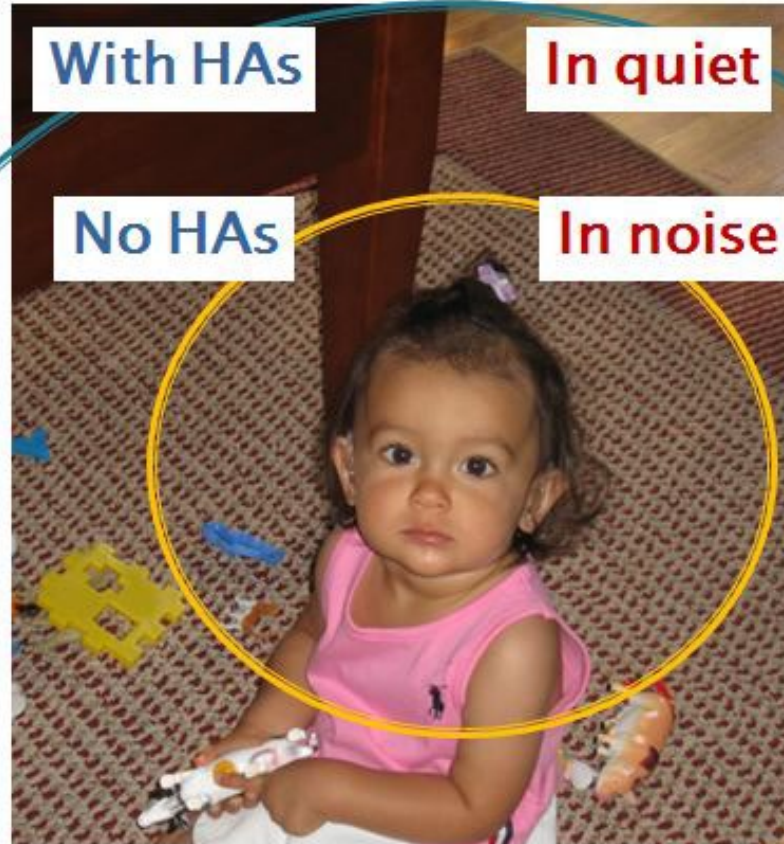
Accessing Language Aurally



Language is Caught, Not Taught

The Listening Bubble

Speech from beyond the range of listening will not be 'caught'



Children learn most new words by overhearing them spoken in context of something that interests them. Missed incidental language means language and social delays.



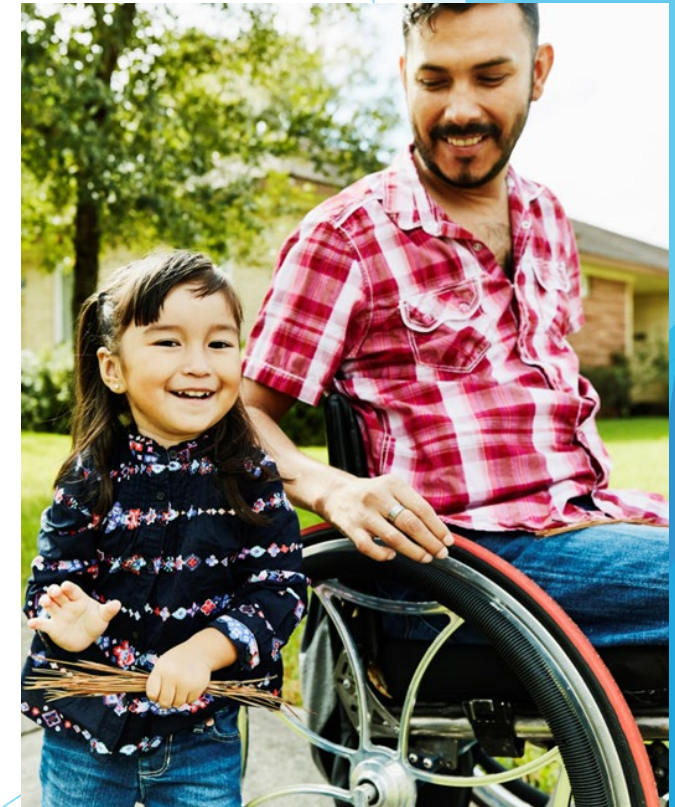
Listening
Fatigue

Smith,
Bale, &
White,
2005

If children have access to fluent language models and have no other neurocognitive considerations, they are typically considered fluent users of their language by age 5.

Importance of the Language of the Home

- In developed countries, roughly one child in 1000 will be born with a bilateral hearing loss of at least 40dB ([Smith, Bale, & White, 2005](#))
- 95% of DHH children will be born into homes where only spoken languages are in use ([Mitchell & Karchmer, 2004](#)).



Providing Visual Access to the Language of the Home...

- ▶ allows parents to share their native language with their d/hh child.
- ▶ complements audition and facilitates learning to listen.
- ▶ is possible for parents using their spoken language as a starting point.

Benefits of Cued Speech for Speech Perception and First Language Development

Leybaert, J. & LaSasso, C. (2010)

- ▶ CI limitations
- ▶ Speech perception is multimodal
- ▶ Visual learning experience
- ▶ Training effect on speechreading
- ▶ Facilitates natural language development
- ▶ Late implantees
- ▶ Noisy Conditions

LaSasso, C.
& Crain, K.
(2015)

Of the available communication systems for conveying English conversationally (oral-aural methods, Manually Coded English sign systems, Cued Speech), only Cued Speech is structurally capable of affording clear, complete visual access to English.

Cued Languages
(i.e., Cued American
English) Provide
Complete Access to:

- ▶ Phonology
- ▶ Morphology
- ▶ Syntax
- ▶ Semantics
- ▶ Pragmatics

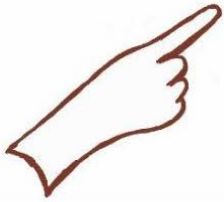
Cued Languages Facilitate Listening and Oral Communication

- ▶ 30-35% of English is visually accessible on the mouth.
- ▶ Context helps, but not always.
- ▶ Easier to listen and understand familiar language.
- ▶ The more a child knows the less cognitive load there is to understand the message.
- ▶ Building knowledge requires facility with the language.

Cues of American English

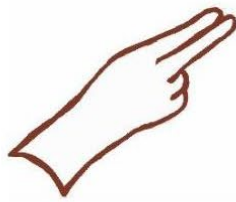
with Phonemic Spelling

Handshapes



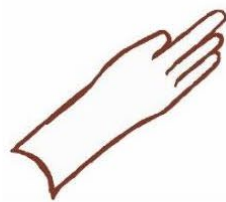
Handshape 1

/d/ dad
/p/ peep
/zh/ azure



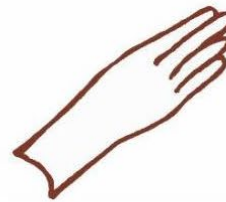
Handshape 2

/k/ cook
/TH/ that
/v/ vee
/z/ zoo



Handshape 3

/h/ ha
/r/ row
/s/ say



Handshape 4

/b/ bob
/n/ new
/wh/ why



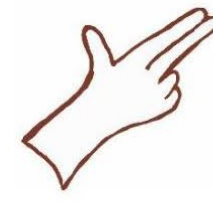
Handshape 5

/f/ fife
/m/ moo
/t/ tot
no consonant
before vowel



Handshape 6

/l/ lull
/sh/ shoe
/w/ wee



Handshape 7

/g/ gag
/j/ judge
/th/ thumb



Handshape 8

/ch/ church
/ng/ ring
/y/ you

Placements & Movements



Mouth (m)

/ee/ eat
/ur/ earth



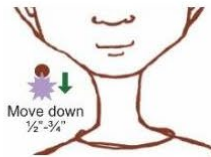
Chin (c)

/aw/ awe
/e/ ebb
/ue/ blue



Throat (t)

/a/ apple
/i/ if
/oo/ cook



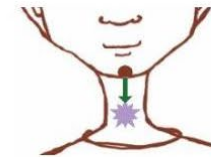
Side-Down (sd)

/uh/ um



Side-Forward (sf)

/ah/ hot
/oe/ oh



Chin-Throat (c5t)

/ay/ aim
/oi/ oil



Side-Throat (s5t)

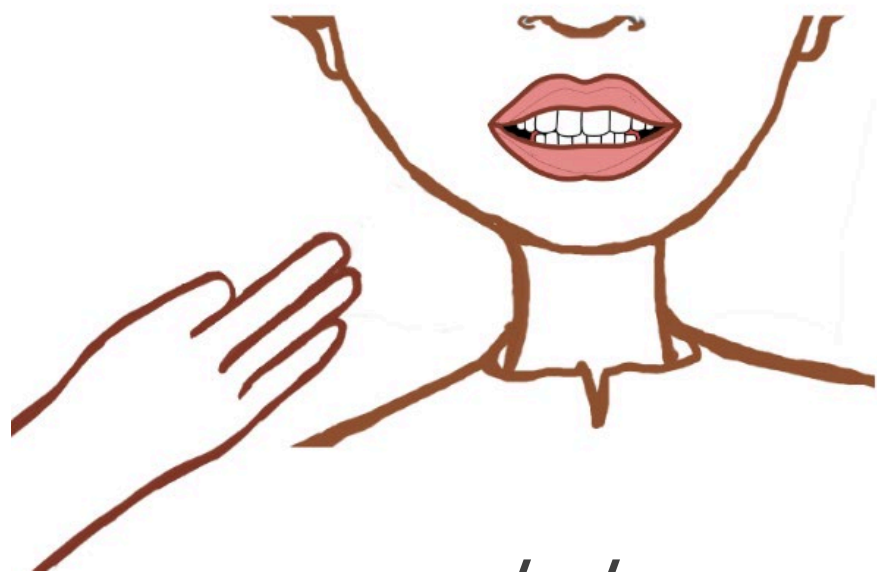
/ie/ eye
/ou/ how



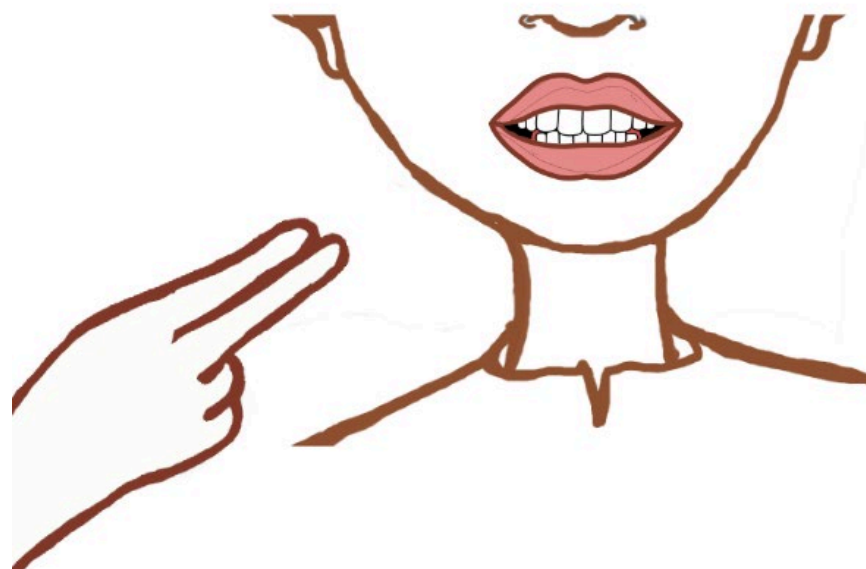
Side (s)

no vowel
after
consonant

Discriminating Phonemes



/s/

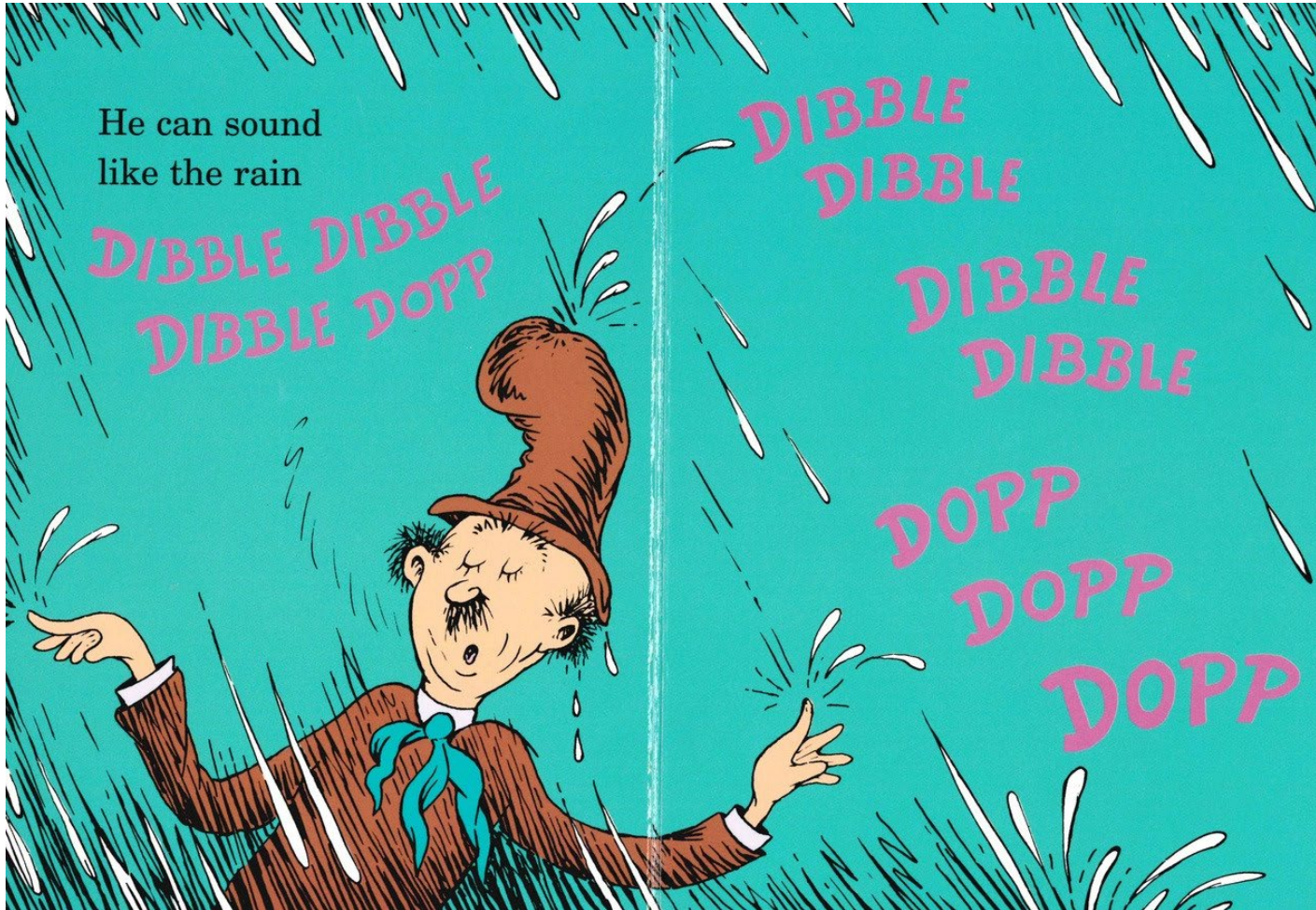


/z/

Bombard Children with Language

- ▶ From birth
- ▶ Vary vocabulary using synonyms
- ▶ Play with words
- ▶ Provide visual access to conversations not directed at the child

Playing with Language

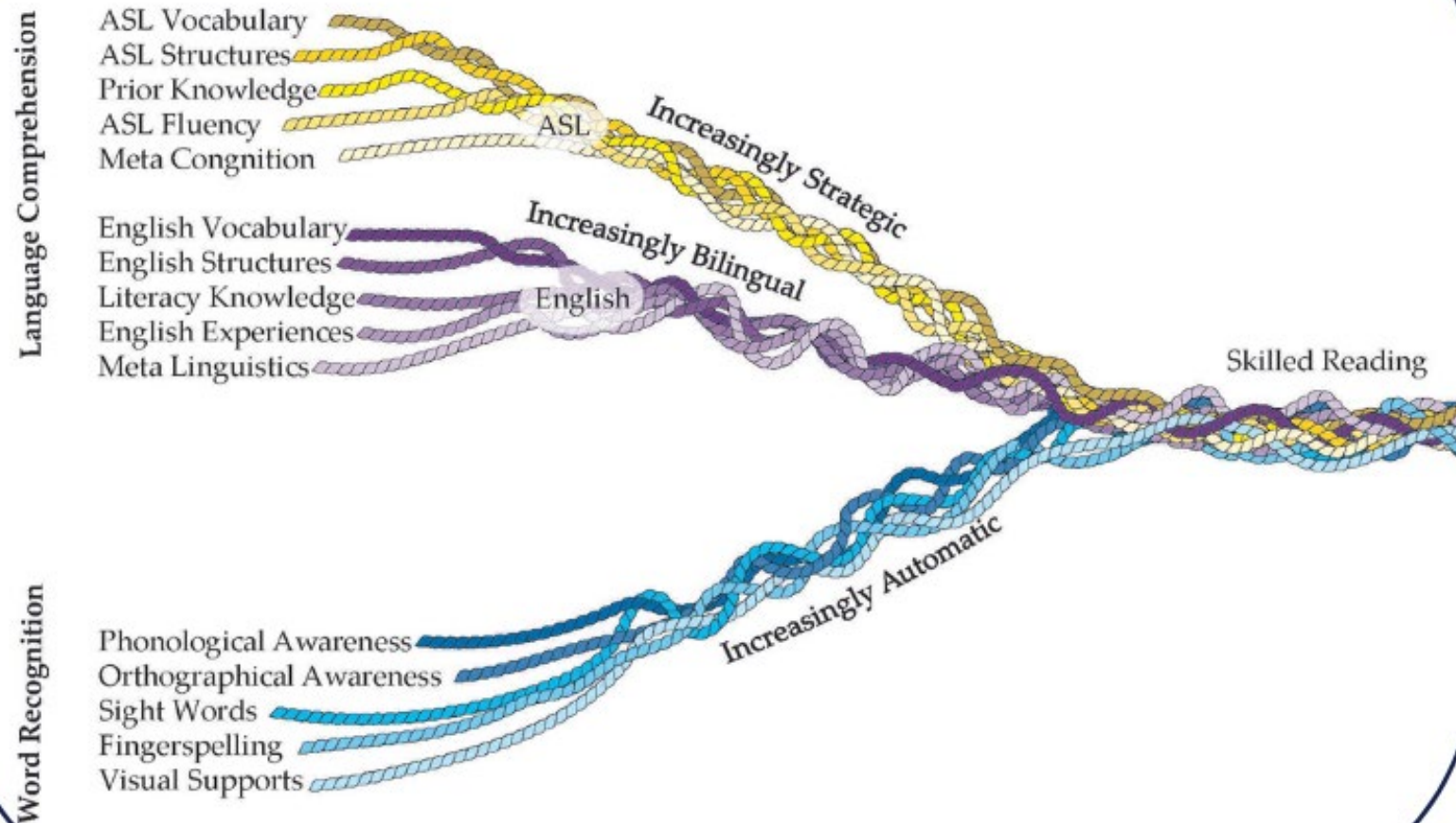


Mr. Brown Can Moo. Can You? By Dr. Seuss

Cued Languages and Bilingualism

- ▶ Cueing individuals can also use American Sign Language
- ▶ Cuers can use more than one cued language (research about tri-lingual child, bilingual classes)

Deaf Reading Rope



1

Learn the basics of the system in a weekend

2

Develop awareness of the rules of your language

- Morphology
- Sounding like a native

3

Slow and steady practice

Developing Fluency in Cueing



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