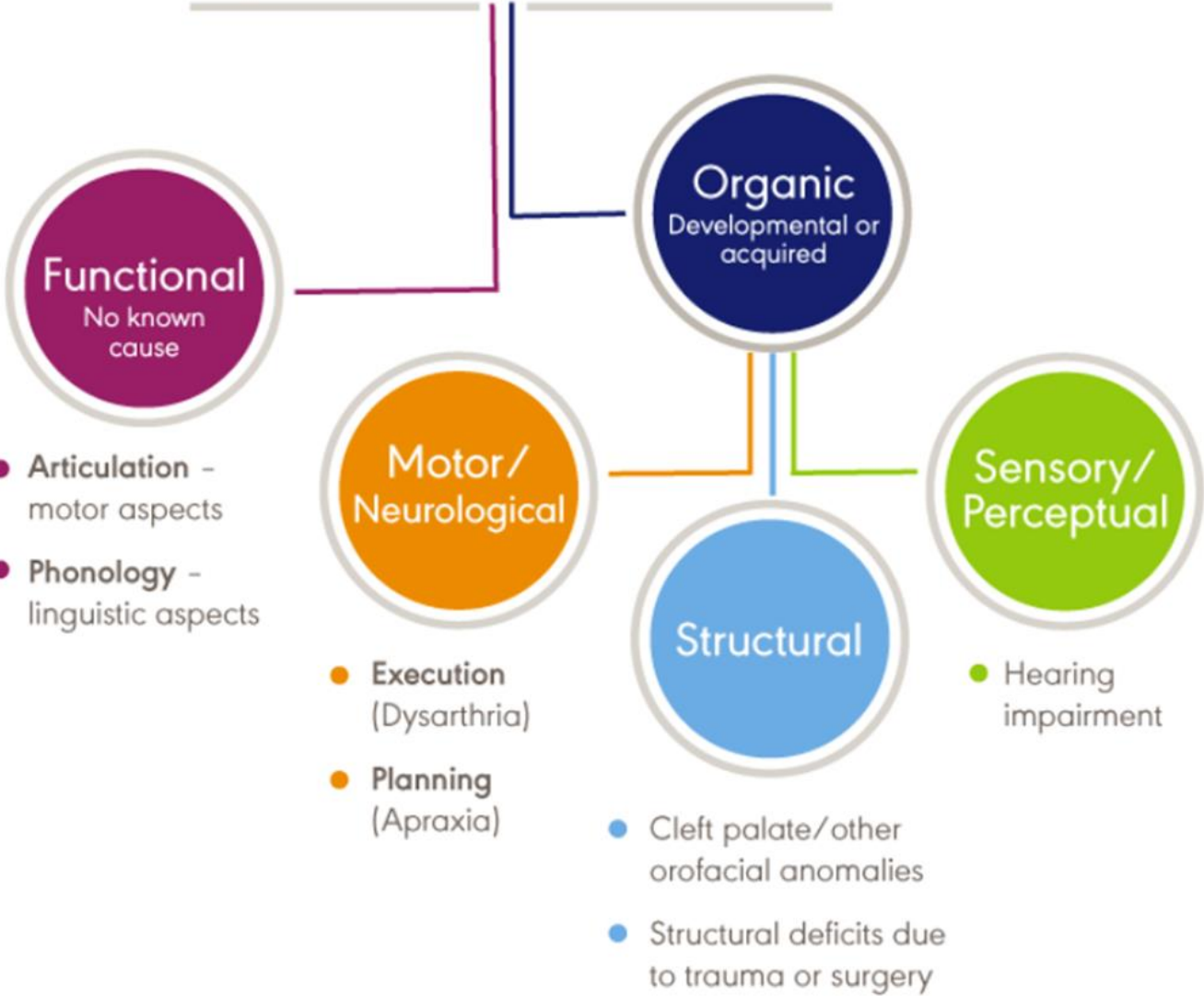




**Speech and Language
Best Practices Speech Sound
Production**

**Director's Webinar
November 7, 2023**

Speech Sound Disorders



[Speech Sound Disorders – Articulation and Phonology, ASHA](#)

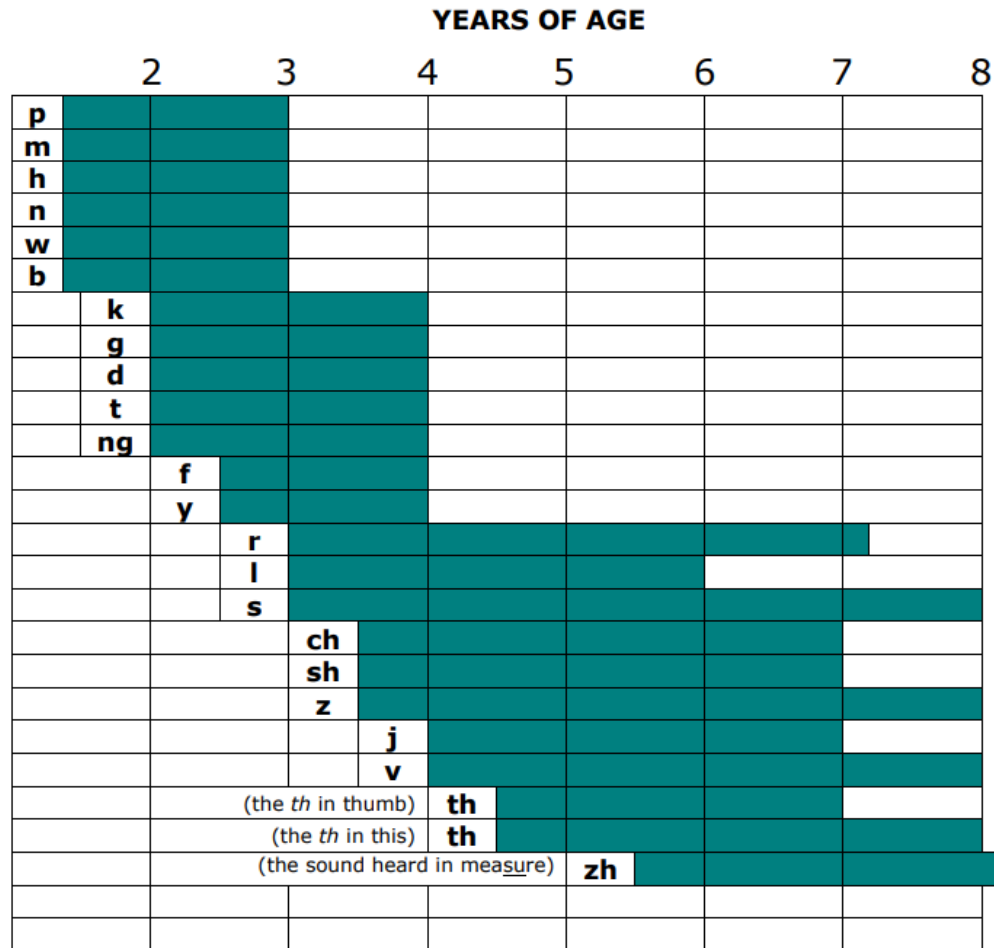
Previous Norms

- Sanders (1972) “the horizontal bar graph” (left side indicated 50% mastery, right side of bar indicated 90% mastery)
- Iowa-Nebraska norms (1990) sample only in the Iowa-Nebraska region of the United States (997 children ages 3-8)
- Shriberg (1993) “early, middle, late eight (64 children ages 3-6)

Adapted from Neal, A. “Rethinking the School Based SLP Workload Under the Lens of IDEA,” GOSSLP Conference, February 9, 2023.

Speech Sound Development Chart

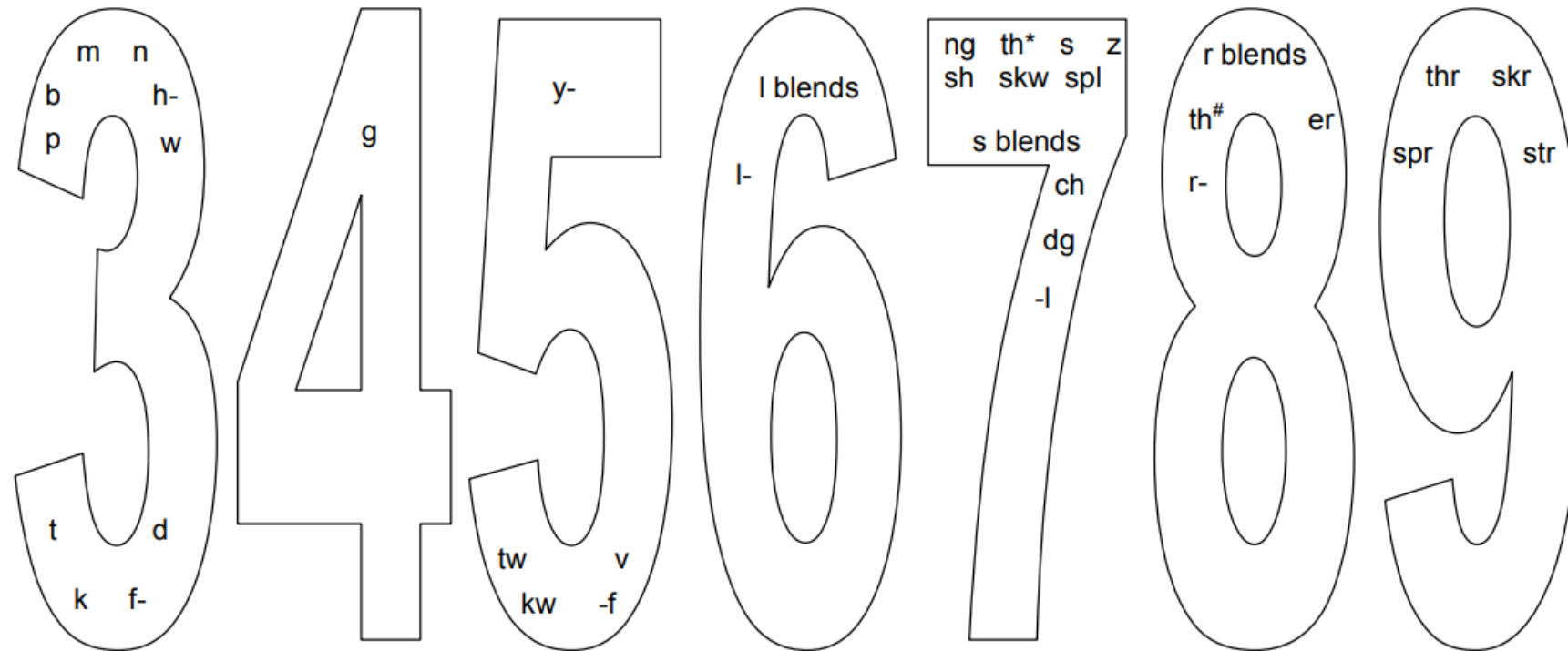
Horizontal bars indicate a range of typical sound development in children.



Source: Sander, Eric K. "When Are Speech Sounds Learned?" JSKD, 37 (February 1972).

Suggested Ages for Acquisition for Boys Based on Iowa Nebraska Norms

The chart below shows recommended ages of acquisition, based on the ages when 90% of English speaking boys produce single sounds (before or after a vowel), consonant blends, and clusters. Sounds acquired during the second half of the year (ex., 3^{1/2}, 4^{1/2}, etc) are shown at the bottom of each year. Pre and post vocalic positions are noted using the - and all vowel sounds are expected by age 3. This work was originally published by Smit, Hand, Freilinger, Bernthal, and Bird¹ and is considered a recent comprehensive study. Additional information is available from *Speech-Language Pathology Services in Schools: Guidelines for Best Practice*².



New Speech Sound Norms

MCLEOD & CROWE, 2020							
0-3;0 years	/b/ (2;7)	/n/ (2;9)	/m/ (2;9)	/p/ (2;9)	/h/ (2;11)	/w/ (2;11)	/d/ (3;0)
3;0-4;0 years	/g/ (3;1)	/k/ (3;2)	/f/ (3;2)	/t/ (3;3)	/ŋ/ (3;4)	/j/ (3;10)	/g/ (3;1)
4;0-5;0 years	/v/ (4;3)	/dʒ/ (4;3)	/s/ (4;3)	/tʃ/ (4;6)	/l/ (4;6)	/ʃ/ (4;7)	/z/ (4;9)
5-6;5 years	/ð/ (5;9)	/ʒ/ (5;11)	/r/* (5;6)	/ə/ (5;6) *includes all vowel controlled /r/ phonemes		/θ/ (6;5)	

Children's English Consonant Acquisition in the US: A Review by McLeod and Crowe, 2020

- Comprehensive review of 15 studies
- 18,907 students
- Most consonants acquired by age 5.0
- Authors recommend a synthesis of knowledge from multiple sources in clinical decision making



[Crowe, K. and McLeod, S. "Children's English Consonant Acquisition in the United States: A Review," American Journal of Speech-Language Pathologist Volume 29, Issue 4, November 2020.](#)

Eligibility Considerations: More than Norms

- Consonants and vowels
- Consonant clusters
- Polysyllables
- Speech perception
- Intelligibility
- Stimulability
- Phonological awareness
- Spelling
- Reading
- Academic and/or social impact
- Insights from the child
- Insights from parents and teachers



[Crowe, K. and McLeod, S. "Children's English Consonant Acquisition in the United States: A Review," American Journal of Speech-Language Pathologist Volume 29, Issue 4, November 2020.](#)

Georgia Department of Education

Next Steps

- Taskforce Development – to consist of Speech-Language Pathologists currently practicing in Georgia schools and district leaders
- Purpose – to study available evidence-based information related to speech sound production norms and to make recommendations for school-based speech and language eligibility criteria in Georgia
- Goal – to establish speech sound normative data that supports consistent eligibility criteria from district to district across Georgia



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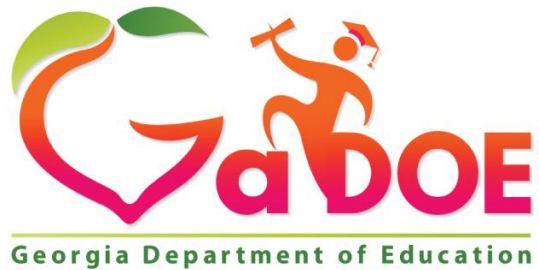
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