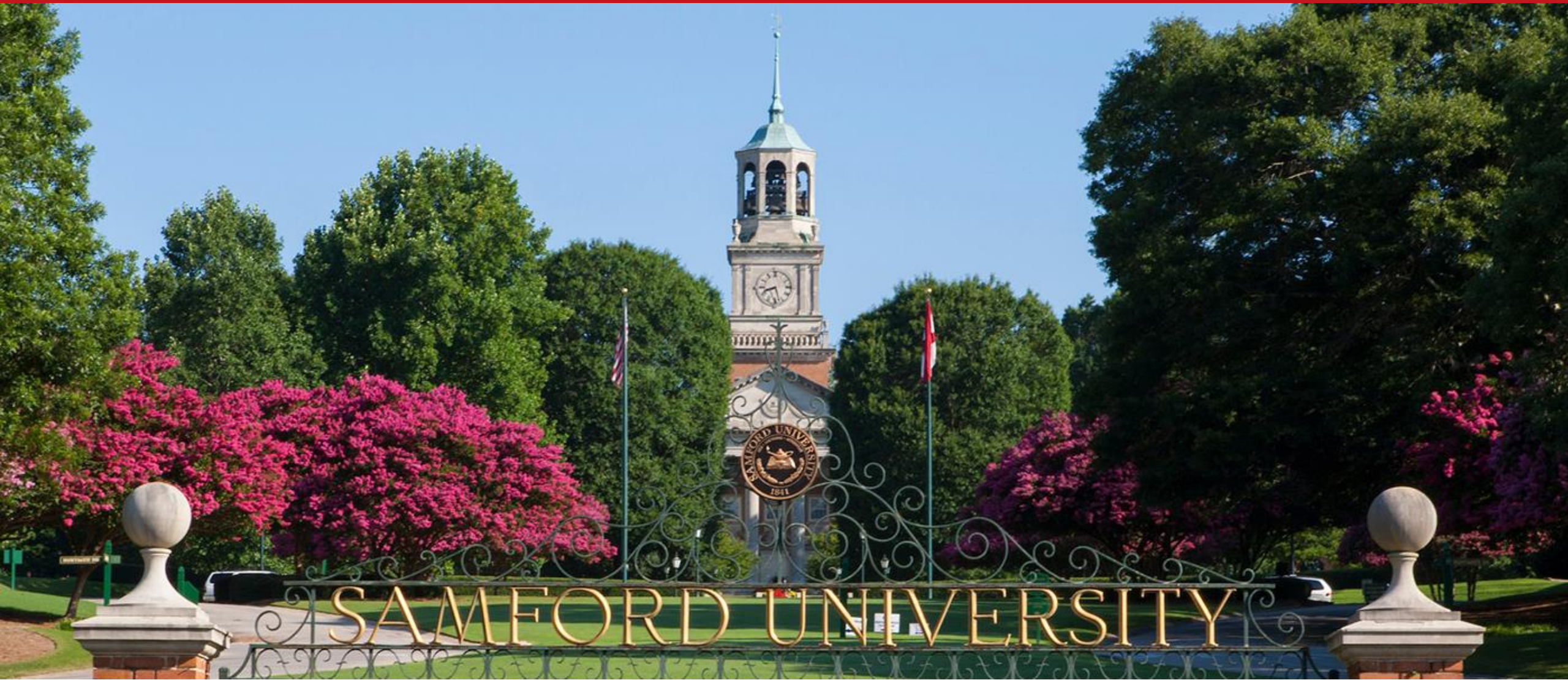




Samford University

School of Health Professions





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Multisensory Teaching of Reading Skills

SHAA 2023

Financial disclosures:

Samford University-receive salary for employment

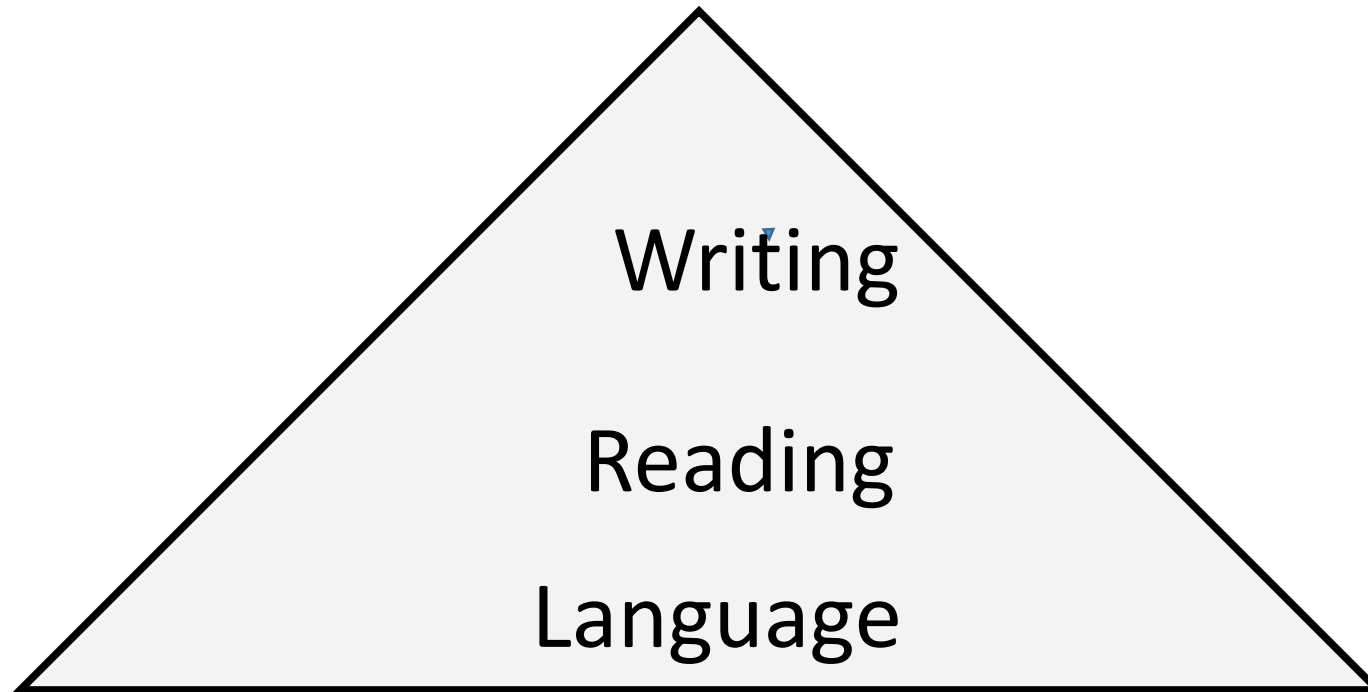
Communication & Reading Therapies-receive salary for employment

Learning objectives

1. **Describe the relationship between oral language and literacy**
2. **Identify effective strategies for promoting literacy through speech and language intervention**
3. **Design and implement activities for supporting reading skills during treatment sessions**
4. **Describe assistive technology options for students with reading disorders**

Oral language and literacy

- Reading is a language-based skill (Kamhi & Catts, 2012; Moats, 2010; Perfetti, 2010; Wagner, Torgesen, & Rashotte, 1994)



Relationship of Phonological Disorders to Literacy

- **Children who have speech sound disorders or a history of articulation errors (even just one error) have more difficulty with phonological awareness tasks than typically developing peers (Webster & Plante, 1992)**
- **Children with reading disabilities have been found to make more speech production errors than their typical peers (Catts, 1986; Gillon, 2004; Rvachew, 2007; Snowling, 1981)**
- **Research has demonstrated a correlation between speech sound disorders and literacy outcomes with a clear indication of negative impact (Peterson, Pennington, Shriberg, & Boada, 2009; Preston & Edwards, 2010; White-Canales & McElroy-Bratcher, 2015)**
- **Early deficits in receptive and expressive vocabulary are associated with later reading difficulties (Van Vierssen and colleagues, 2017)**

Phonological Awareness Assessments

- *CTOPP-2, PALS, PAST, TOPEL, PAT-2 NU, TILLS, AimsWeb, DIBELS*
- [Early Identification of Language-Based Reading Disabilities: A Checklist](#)

Multisensory Instructional Strategies

Multisensory refers to linking visual, auditory, and tactile information to promote learning

Examples: Letter tracing during phoneme tasks, writing letters while naming them, skywriting, syllable counting using fingers, arm or body

History of Multisensory Instructional Strategies

- **Educational psychologists in the 1890s proposed the theory that including kinesthetic movement increased learning**
- **In the early 1900s Samuel Orton recommended using all sensory pathways to reinforce weak memory patterns**
- **Montessori based his educational approach on multisensory instruction**

Essential Components of Reading

- * **Phonemic awareness**
- * **Phonics**
- * **Vocabulary**
- **Fluency**
- * **Comprehension**

Evidence-based multisensory phonemic awareness activities

- Clap for each word in a sentence [Counting words in sentences](#)
- Place hand under chin to count syllables [Counting syllables](#)
- Tap out sounds in words to target [Counting sounds and letters](#)

- Substitute sounds in words to make new words [Sound substitution](#)

- Focus on identification and production of rhyming words
- Match words that begin or end with the same sound

Multisensory phonemic awareness goals

- **Student will identify and/or produce rhyming words**
- **Student will complete sound substitution, deletion and/or addition tasks using blocks in CCVC and CVCC words**

Evidence-based multisensory phonics activities

- Lindamood Bell phoneme sequencing program **LiPS**
- Alphabet terms e.g., consonant, vowel, blend, digraph
- Knowledge of alphabet letters and sounds **Alphabet knowledge**
- Discrimination of digraphs versus blends **Blends**
- Alphabet sequencing
- _fg
- h_j

Multisensory phonics goals

- **Student will identify sound/symbol correspondence relationships for single consonants, initial consonant blends, and final consonant blends**
- **Student will identify sound/symbol correspondence relationships for digraphs**
- **Student will identify sound/symbol correspondence relationships for vowel combinations**
- **Alabama state standards**

Instructional framework for teaching vocabulary

Ebbers and Denton (2008) list effective practices for teaching students with language-based learning disorders as follows:

- 1) Use explicit instruction**
- 2) Apply cognitive and metacognitive strategies**
- 3) Incorporate questioning approaches**
- 4) Use collaborative engagement involving verbal interactions**
- 5) Provide many opportunities for practice with teacher feedback**

Evidence-based multisensory vocabulary activities

- Collaborate with students to choose words in a passage that are unfamiliar
 - [Passage](#)
 - [Passage with synonyms](#)
- Create semantic maps and word matrices using high priority roots
 - [Semantic map](#)
 - [Word matrix](#)
 - [Jamboard](#)
- Break words into morphemes and discuss meanings of each part
 - [Morpheme video](#)

Multisensory vocabulary goals

- **Match prefixes, roots, and suffixes into target words on 3/5 trials**
- **Alabama state standards**

Research-validated Strategies for Comprehension Instruction (NICHD, 2000)

- Comprehension monitoring
- Cooperative learning [Clunk to Click](#)
- Graphic and semantic organizers [Kidspiration](#)
- Question answering
- Question generation [ReQuest](#)
- Story structure [Project Read Language Circle](#)
- Summarization [RAP Paraphrasing Strategy](#)

A combination of strategies is the most effective

Research and Practice

- 1. Instruction should be scientifically based (NICHD, 2000)**
 - **Does not mean instructional methods lacking scientific evidence always have no value since scientific evidence is lacking**
 - **Clinical observations can create hypothesis and develop research questions**
- 2. Training in learning processes should be linked to the content that is to be learned**
- 3. Reading disabilities can be prevented in many young children and alleviated at any age**

Assistive Technology

- [Don Johnston Learning Tools](#)
- [Learning Ally](#)
- [Bookshare](#)
- [Text Help](#)
 - [Read&Write](#)
- [Glean](#)
- [Otter AI](#)
- [Grammarly](#)

Conclusion

- **Low levels of literacy affects individuals of all ages**
- **Intervention can be beneficial at all stages of reading development**
- **Intensive instruction may be needed for older students**
- **Schools may need to adapt their frameworks to support reading intervention in the upper grades**
- **Multisensory reading instruction allows students to gain the necessary reading and writing skills for school and life**



“Evidence-based reading intervention at an early age improves reading fluency and facilitates the development of those neural systems that underlie skilled reading. Teaching matters and can change the brain.” (Shaywitz, 2004)

Resources

- **International Dyslexia Association** <https://dyslexiaida.org/>
- **Orton-Gillingham Academy** <https://www.ortonacademy.org/>

References

- Birsh, J. & Carreker, S. (2018). *Multisensory Teaching of Basic Language Skills, Fourth Edition*. Brookes Publishing, ISBN: 9781681253084.
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