

**Wednesday, November 8, 2017**

**12:30 p.m. - 4:00 p.m.**

**PC5 Reading Intervention for Children and Youth With Reading Disabilities: Questions Answered and Questions Remaining Regarding the Impact of Age, Comorbidities, Lexical, and Individual Child Characteristics on Reading Intervention Response and Outcomes**

Chair: Maureen W. Lovett, Ph.D.

There is emerging consensus on some overall parameters of effective intervention for children and youth who struggle with reading development, but relatively little insight into why some children respond readily and others show less response. Like reading itself, intervention outcomes are multidimensional, and our ability to measure decoding, word reading, and spelling progress is far superior to our capacity to assess changes in vocabulary, fluency, and reading comprehension. We know that it is easier to intervene earlier, but we do not fully understand the limits and the reasons why later reading intervention is so difficult.

This symposium includes four researchers who have been active in reading intervention research for many years. From different perspectives, these researchers describe some of their latest work on understanding intervention responses in different samples of children and youth with reading disabilities (RD) and young children at risk. All presenters address the implications of their findings for teachers and practitioners working with struggling readers.

**Understanding Unresponsiveness to Tier 2 Reading Intervention: Exploring the Classification and Profiles of Adequate and Inadequate Responders in First Grade**

Donald L. Compton, Ph.D.

This presentation examines the profiles of first-graders who responded adequately and inadequately to intensive Tier 2 reading intervention and assesses how profiles differ based on the criteria used to classify unresponsiveness. Nonresponders were identified using two different methods: (i) a reading composite with weighted standardized scores for untimed word identification and word attack, timed sight-word reading and decoding, and reading comprehension at the end of first grade ( $n = 23$ ; 18.4%), and (ii) local norms on first-grade word-reading fluency (WIF;  $n = 31$ ; 24.8%).

Significant level effects were found using both these criteria, indicating that the groups differ from each other across domains. Significant shape effects were found using the WIF criteria only, suggesting that relative strengths and weaknesses distinguish the groups. During the presentation, findings are used to consider issues related to the identification and placement of students in appropriately intensive and targeted interventions.

**The Development of the Orthographic Lexicon in At-Risk First Graders**

Laura Steacy, Ph.D.

This presentation reports the results of a first-grade decoding and fluency intervention, including in each lesson a short sight-word building activity. The number of exposures required to master words was

recorded for 111 at-risk first-graders. We specifically examined how many word exposures children at risk for RD required and how this number varied depending on both the linguistic features of words and the cognitive characteristics of the students. We found that the students required, on average, 5.65 exposures for mastery and, after controlling for pretest reading, the best word-level predictors of required exposures were: frequency, word length, vocabulary grade, and imageability (how easily a word can arouse a mental image). The semantic features of words were especially important for poor readers. There was a significant interaction between pretest reading skill and imageability. The results of this study could have important implications for instruction and the order in which we introduce words to students.

### **Reading Intervention Outcomes for Struggling Readers in Different Grades: What is the Influence of Grade-at-Intervention and Pretest Differences Among the Children?**

Maureen W. Lovett, Ph.D.

Reading problems appear more intractable among adolescents, but there are few direct comparisons between younger and older struggling readers receiving similar interventions and assessed on the same outcome and diagnostic measures. This presentation addresses differences in rate and magnitude of responses among younger and older struggling readers and individual predictors of intervention outcomes in the short and long term. The younger sample included 161 children meeting low-achievement criteria for reading disability (RD) who received 125 hours of intervention in grades 1, 2, or 3. The older sample included 270 youth meeting the same RD criteria and receiving 125 hours of intervention in grades 6, 7, or 8. Sizeable intervention effects were obtained for both younger and older RD samples, with some differences emerging among predictors of intervention response. For younger children, the most consistent predictor of growth was WASI IQ; for older readers, it was naming speed.

### **The Impact of Comorbid Specific Language Impairment (SLI) and/or Attention Deficit/Hyperactivity Disorder (ADHD) on Responses to Reading Intervention in Children with Reading Disabilities**

Robin D. Morris, Ph.D.

This presentation addresses questions about the impact of language and attention impairment on intervention response in children with RD. High rates of comorbidity (25%-50%) exist among disorders of reading (RD), language (SLI), and attention (ADHD) in children, suggesting shared behavioral characteristics and possible common neurobiological and genetic foundations. We describe a sample of >100 children with RD (3rd/4th graders) with a range of language and/or attention impairments: 50% have RD only, 20% have RD+ADHD, 17% have RD+SLI, and 13% have RD+SLI+ADHD. All received an explicit reading intervention for 70 hours, as well as school-based reading instruction. Children with RD and different comorbidities showed different intervention responses on reading and neuroimaging-related outcomes. This presentation will focus on how RD children's cognitive, language, and attention attributes interact to impact their level of response or lack of response to RD interventions.

*Disclosure: Maureen W. Lovett, Donald L. Compton, and Robin D. Morris have no relevant financial or nonfinancial relationships to disclose.*