The earlier, the better.
When students display risk for learning disabilities or academic and behavioral difficulties, identification models must enable educators to intervene as early as possible. Students who do not respond as expected to these early interventions should then, if appropriate, receive more intensive remedial interventions.

Response to intervention models integrate prevention and remediation.

Our completed research projects, conducted from 2006 to 2011, included the following:

- **Classification.** This series of studies focused on examining alternatives for identifying students as being learning disabled, using response to intervention (RTI) to make instructional decisions, and developing tools to measure student progress.

- **Early Intervention.** This project focused on the instructional aspects of RTI, specifically the effect of moderately intense levels of intervention on the reading achievement of students at risk for reading problems in first through third grades.

- **Remediation.** This project focused on the implementation and effect of RTI with students in sixth through eighth grades by developing and field-testing screening and progress-monitoring measures and examining secondary and tertiary interventions.

- **Magnetic Source Imaging.** This project used magnetic source imaging to investigate brain activation profiles associated with different subtypes of poor readers and with different response to interventions.

For more information on the Texas Center for Learning Disabilities, please see our website at [www.texasldcenter.org](http://www.texasldcenter.org).
The website provides more detailed information about our research, presentations and papers by center staff members, videos of effective instruction, and an online library containing useful resources related to response to intervention. Examples of lesson plans and assessments used in our research are also available for download.
The Texas Center for Learning Disabilities (TCLD) conducts research that leads to a more comprehensive understanding of the following:

- Reliable and valid classifications of learning disabilities, with direct implications for identification of students with significant reading disabilities, including models that incorporate response to intervention (RTI)
- The role of executive functions in reading comprehension and other academic skills
- Effective interventions and RTI for students at risk for or experiencing serious reading difficulties
- The neural correlates of reading disabilities in children

Through rigorous methodology, TCLD critically evaluates an RTI framework as a potential classification model of learning disabilities. Integrating cognitive, neural, and instructional components of RTI models, this multidisciplinary research provides educators with information about effectively intervening with young students with a range of reading difficulties, including students with learning disabilities and those at risk for learning disabilities.

In addition, TCLD develops screening and diagnostic procedures for identifying struggling readers in middle school.

Research sites include the University of Houston, The University of Texas at Austin, The University of Texas Health Science Center at Houston, and St. Louis University.

Our current research takes the form of four projects to be conducted over 5 years:

- **Classification, Definition, and Integration of Learning Disabilities Research**
  - **Led by:** Dr. Karla K. Stuebing (University of Houston)
  
  **Research:** Identifying individual children who meet criteria for learning disabilities has plagued research and practice since the origin of the concept of learning disabilities. In this project, we leverage the special statistical and clinical expertise of our team and advances in statistical computing and analytic models, simulation, and meta-analysis to continue and extend a long history of research on the classification and definition of learning disabilities, evaluating the reliability of different approaches to identification, the validity of classifications based on intervention response, and the integration of research on classification, executive functions, and intervention.

- **Integrating Executive Functioning Into Remediation of Students With Reading Disabilities**
  - **Led by:** Dr. Sharon Vaughn (The University of Texas at Austin)
  
  **Research:** Our intention is to improve scientific knowledge and clinical practice regarding effective instruction for remediation of reading comprehension difficulties for students in the middle grades (grades 4 and 5) and to link with previous studies that begin in grade 6. It is not clear why reading interventions are less efficacious in secondary environments, and the lack of attention to grades 4–5 is a major gap in knowledge and practice. Through clinical trials designed to scientifically determine the efficacy of conceptually designed treatments capitalizing on recent research on reading comprehension, language, and self-regulation, we hope to increase the overall impact of intervention on reading comprehension outcomes for students.

- **Development of a Framework for Executive Functions in the Context of Reading Comprehension Skills and Difficulties**
  - **Led by:** Dr. Paul T. Cirino (University of Houston)
  
  **Research:** Executive functions are conceptualized in different, yet overlapping ways in the neuropsychological, cognitive, and educational literatures, and executive functions have a robust relationship to reading comprehension and other academic skills. This project is designed to clarify the structure of executive functions, determine the relevance of that structure to reading comprehension and other academic skills, and evaluate how to most effectively integrate executive functions into remedial reading comprehension interventions.

- **Neural Correlates of Reading Comprehension in Typical and Struggling Readers**
  - **Led by:** Dr. Jenifer Juraneck (The University of Texas Medical School at Houston)
  
  **Research:** Growing evidence from multimodal brain-imaging studies highlights the importance of a synergistic approach toward characterizing the neurobiological substrate of reading disability. The overall goal of this project is to develop a comprehensive neurobiological model of text comprehension that will supplement the cognitive framework developed for the Executive Functions project (description at left). We will evaluate features of brain organization associated with developmental outcomes of educational interventions addressed in our Intervention project (description above).

Why We Are Needed

Four consensus reports conclude that improving the identification and treatment of students with learning disabilities is central to reform in both general education and special education.

Recent reports highlight the following issues with learning disabilities classification:

- **Inadequate instruction.** Many students identified for special education may not have received adequate reading instruction in the general education classroom, suggesting that the number of individuals identified with learning disabilities may be inflated. Improving reading instruction in general education may reduce this number.

- **Inconsistent identification.** Current regulations for the identification of learning disabilities in the Individuals With Disabilities Education Act lack a research base. This lack of research impedes progress in the implementation of effective instructional approaches for students with disabilities. Thus, the need for research on alternative models for the identification and treatment of learning disabilities is clear.

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1Minority Students in Special and Gifted Education” (Donovan & Cross, 2002); “Rethinking Special Education for a New Century” (Finn, Kortham, & Holkksson, 2001); “Identification of Learning Disabilities: Research to Practice” (Bradley, Danelton, & Hallahan, 2002); “President’s Commission on Excellence in Special Education Report” (2002).