

**DYSLEXIA:  
DEFINITION, WHAT WE KNOW, POINTS OF  
CONTENTION, AND QUESTIONABLE UTILITY**

Donna M. Scanlon

Department of Literacy Teaching and  
Learning



UNIVERSITY  
AT ALBANY  
State University of New York

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**School of Education**  
THE WORLD WITHIN REACH

# What is Dyslexia?

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- According to the National Institute of Child Health and Human Development –
  - “Dyslexia is a specific learning disability that is **neurological** in origin. It is characterized by difficulties with accurate and / or fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficit in the **phonological component of language** that is often **unexpected in relation to other cognitive abilities and the provision of effective classroom instruction**. Secondary consequences may include problems in reading comprehension and reduced reading experience that can impede growth of vocabulary and background knowledge.”

# Problems with the Concept

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- For individual children it is virtually impossible to determine whether their reading difficulties are neurological in origin.
  - Autopsies
  - Twin Studies
  - Brain Scans
- Individuals can experience word reading difficulties for a variety of reasons.
- Criteria for diagnosis are inconsistent across districts, states and countries.

# What is the difference between dyslexia, (specific) reading disability, and reading difficulties in general?

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- In the research literature, the terms dyslexia and reading disability tend to be used interchangeably.
- Until 10-15 years ago, the distinction between reading disability/dyslexia and poor reading was based on the existence of an IQ-Achievement discrepancy.
- Today, limited response to instruction/intervention(s) is often the criterion used to place readers in the disabled/dyslexic category.

# Literacy Professionals' Responses to a National Survey re RtI (2013)

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- Approximately 40% indicated that implementation of RtI had somewhat or considerably reduced the incidence of LD classification.
  - Some indicated that this was due to the provision of more timely and effective intervention.
  - Others indicated that it was due to reluctance on the part of school personnel to classify if children demonstrated any growth at all.

# Compensated Dyslexics?

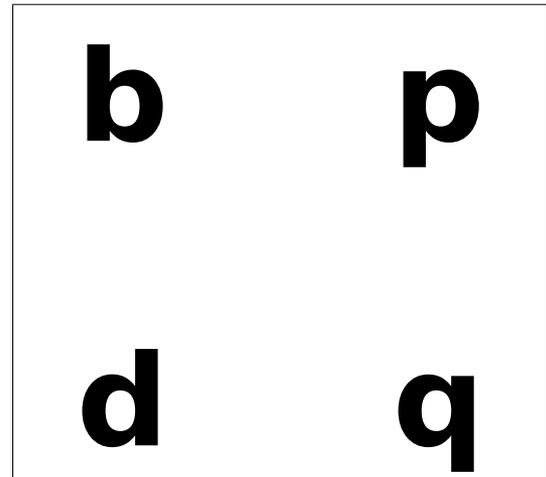
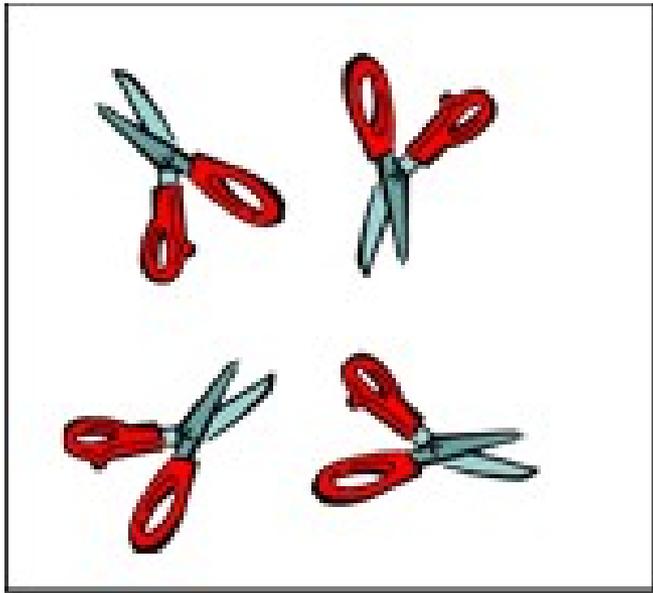
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- Are students who respond well to intervention:
  - False positives? (Meaning they were wrongly identified as having reading problems.)
  - Or, compensated dyslexics? (Meaning they are and always will be dyslexic – but they have learned to compensate for their difficulties.)

# Common Myth Related to Dyslexia

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- Dyslexics “see” things backwards.



# Points of **Disagreement** among Educational Professionals

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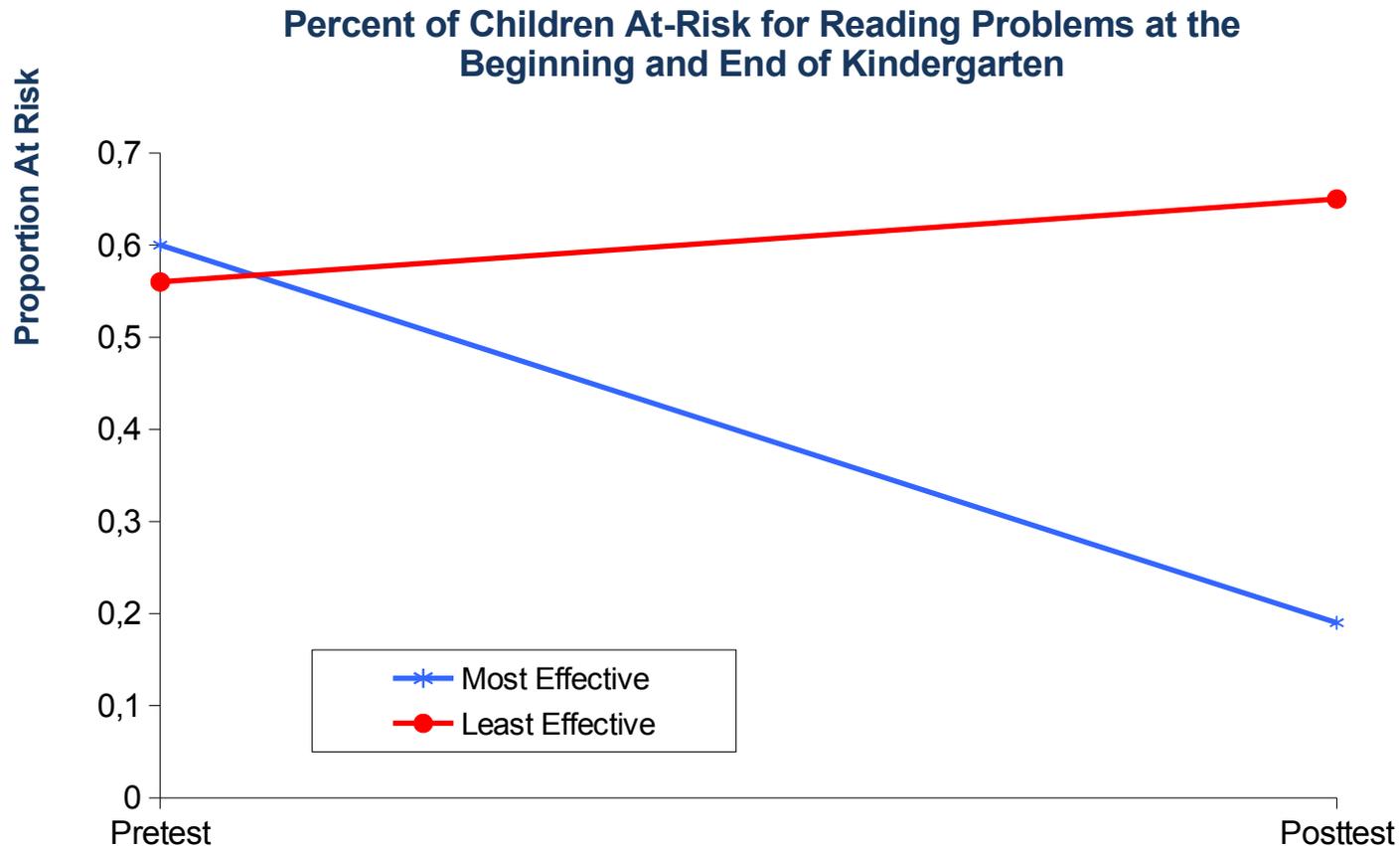
- Dyslexics have special talents.
- Fifteen to twenty percent of the population is dyslexic.
- Dyslexics require an explicit, systematic, multi-sensory program in order to learn to read.

# Points of **Agreement** among Educational Professionals

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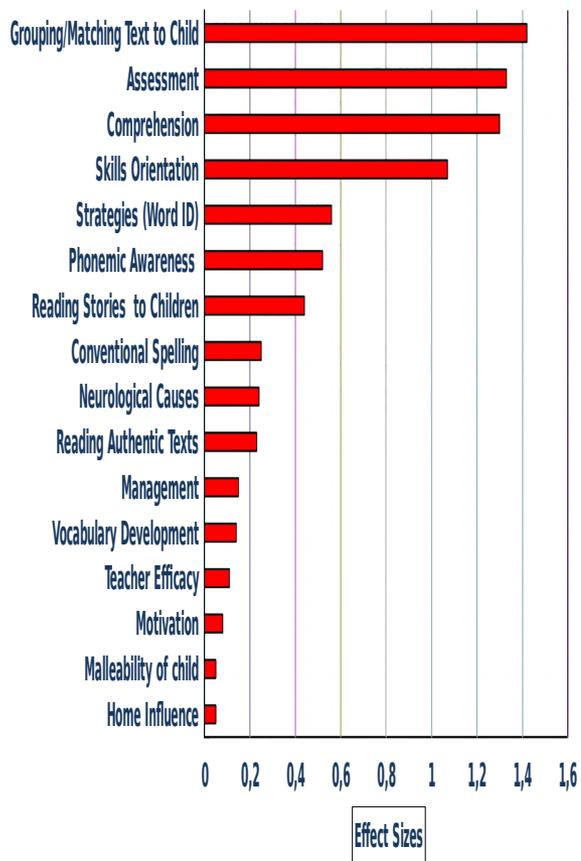
- Some children experience difficulties in literacy acquisition.
  - Sometimes extreme difficulties
- Genetic factors contribute to some literacy learning difficulties.
- Many literacy learning difficulties can be traced to instructional factors.

# Comparison of More vs. Less Effective Kindergarten Classroom Teachers



Note: Effectiveness was determined by changes in the number of children who qualified as At-Risk based on the Phonological Awareness Literacy

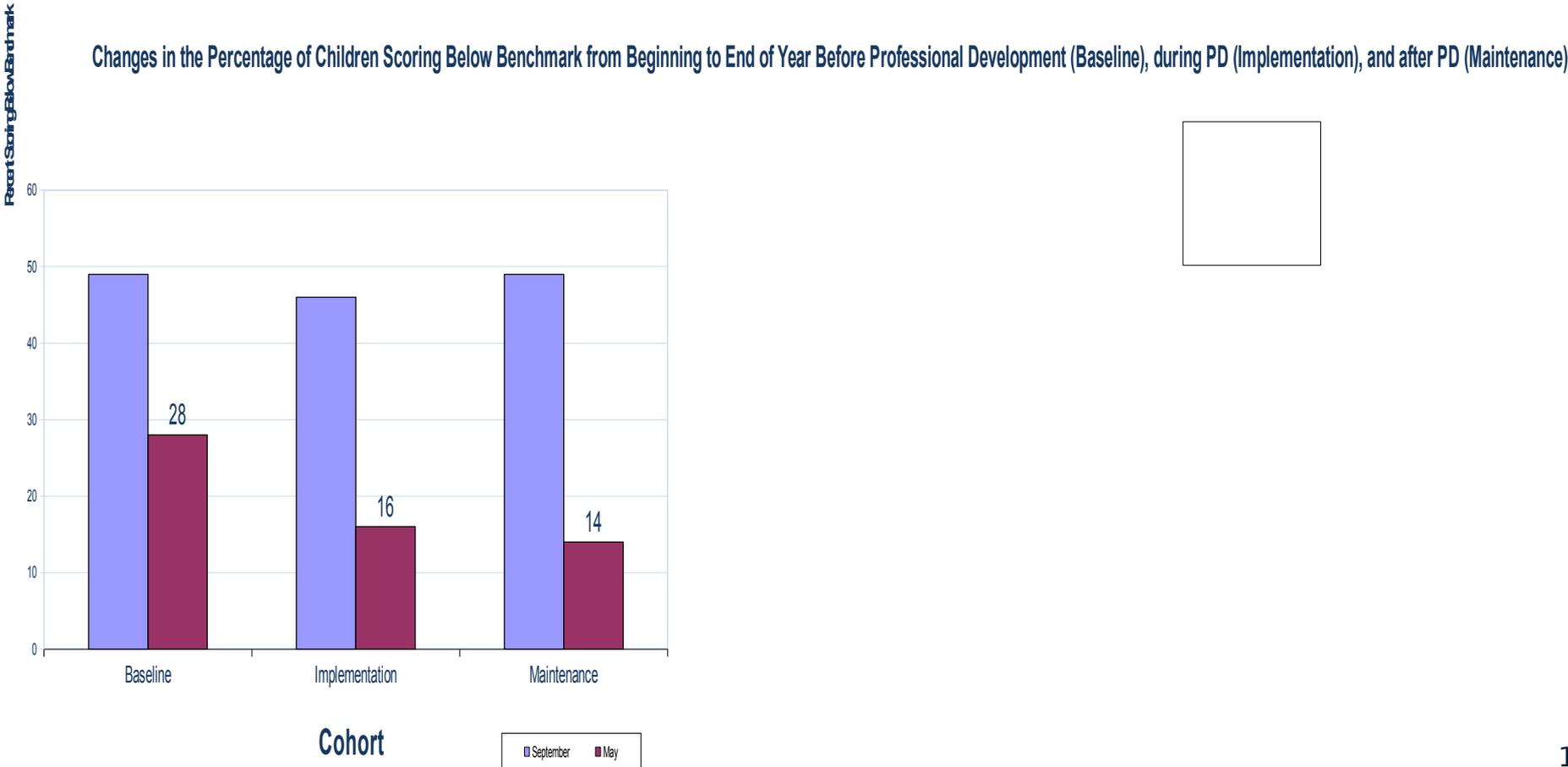
Screening (PAL-S) conducted at the beginning and end of the school year.



Note: Small effect sizes indicate that teachers in the two groups responded similarly.

Large effect sizes indicate that teachers in the more effective group

# Comparison of the Effectiveness of Kindergarten Classroom Teachers before and after ISA Professional Development

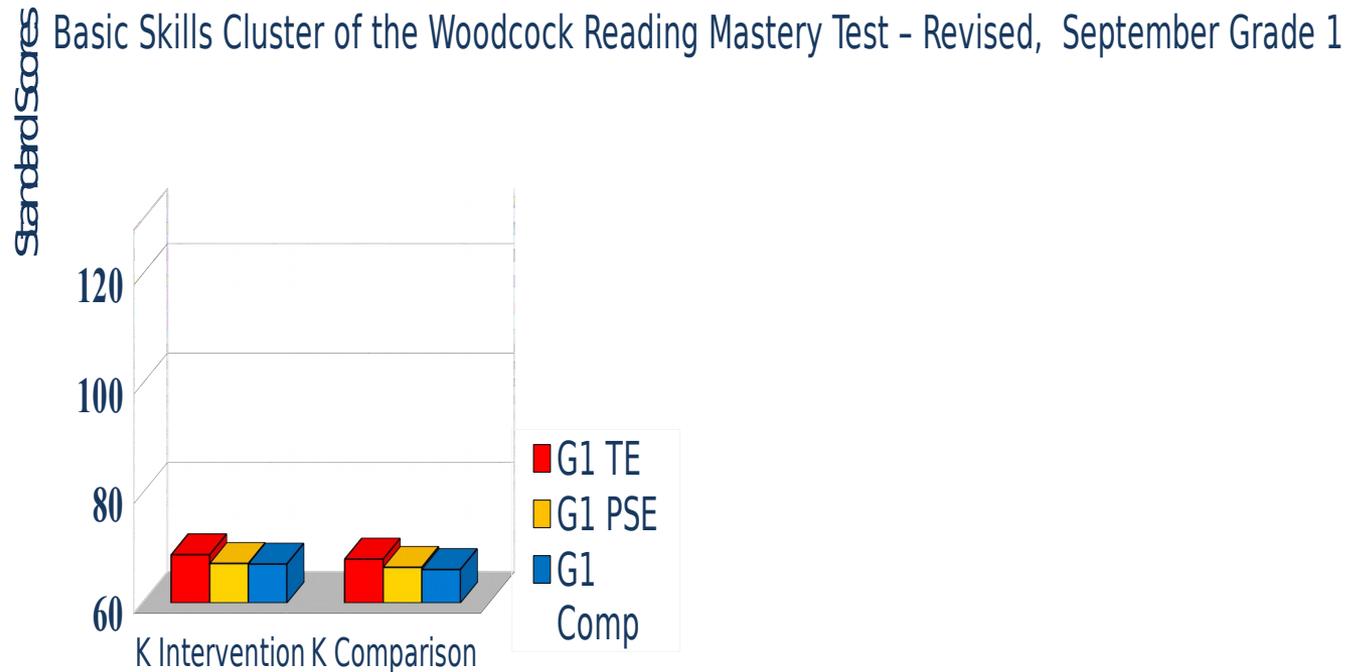


# More Points of **Agreement** among Educational Professionals

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- Early intervention reduces the number for children who demonstrate long-term reading difficulties.
- Intervention in the early primary grades is more effective in reducing the incidence of serious reading difficulty than intervention provided in the middle elementary grades and beyond.
  - We need to close the gaps in literacy skill early before they grow and become disabling.

# Comparisons among Six Groups of First Graders Exhibiting Literacy Learning Difficulties in K & 1



# Differences between the First Grade Treatment Conditions

## Components of the lesson

Reading and Re-reading

Phonological Skills

High Frequency Words

Writing

## Text Emphasis

15 Minutes

5 Minutes

5 Minutes

5 Minutes

## Phonological Skills Emphasis

5 Minutes

15 Minutes

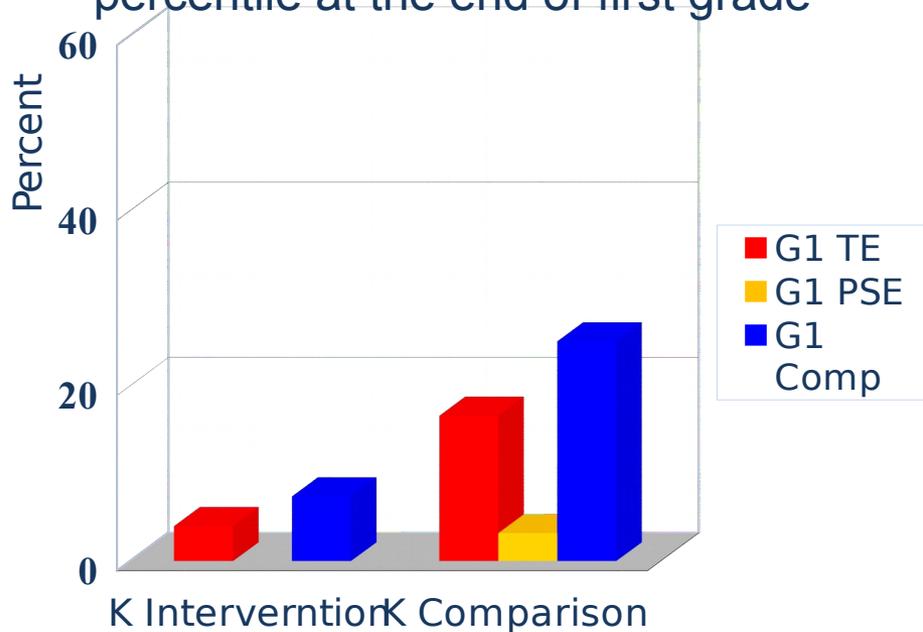
5 Minutes

5 Minutes

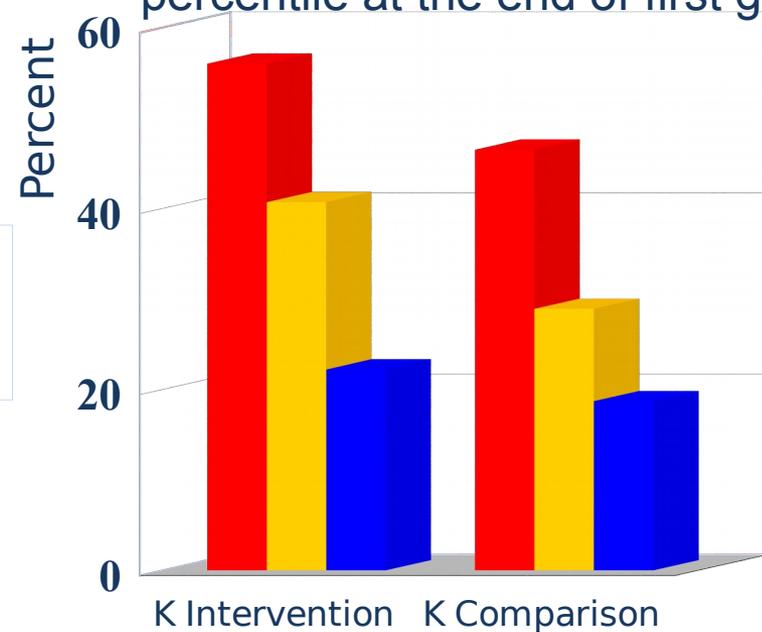
# End of First Grade Results

(TE = Text Emphasis, PSE = Phonological Skills Emphasis, Comp = Comparison)

Percent scoring **BELOW** the 15<sup>th</sup> percentile at the end of first grade



Percent scoring **ABOVE** the 50<sup>th</sup> percentile at the end of first grade



Note: The children who had intervention as kindergartners and still qualified for intervention as first graders might be considered to be “harder to remediate.” Nevertheless, as a group, they performed better than the kindergarten comparison groups at the end of first grade.

# Conclusions Based on Research

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- Most reading difficulties related to word reading skills can be prevented through effective instruction provided by classroom and intervention teachers in the early grades.
- There is no evidence to support the claim that scripted programs based on Orton-Gillingham-type (multi-sensory) instruction is more effective than other approaches to instruction or intervention.
- Teacher knowledge and practice is an important determinant of literacy learners' development – especially those who demonstrate the weakest skills.

# What is the Utility of the Concept of Dyslexia/Reading Disability?

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- On the upside:
  - It helps to convey that reading and writing difficulties are not due to low intelligence.
  - Students with a documented learning disability are eligible for extra supports that may help them succeed in school.
- On the downside:
  - Such a designation has the potential to lower expectations among students, parents, and teachers.

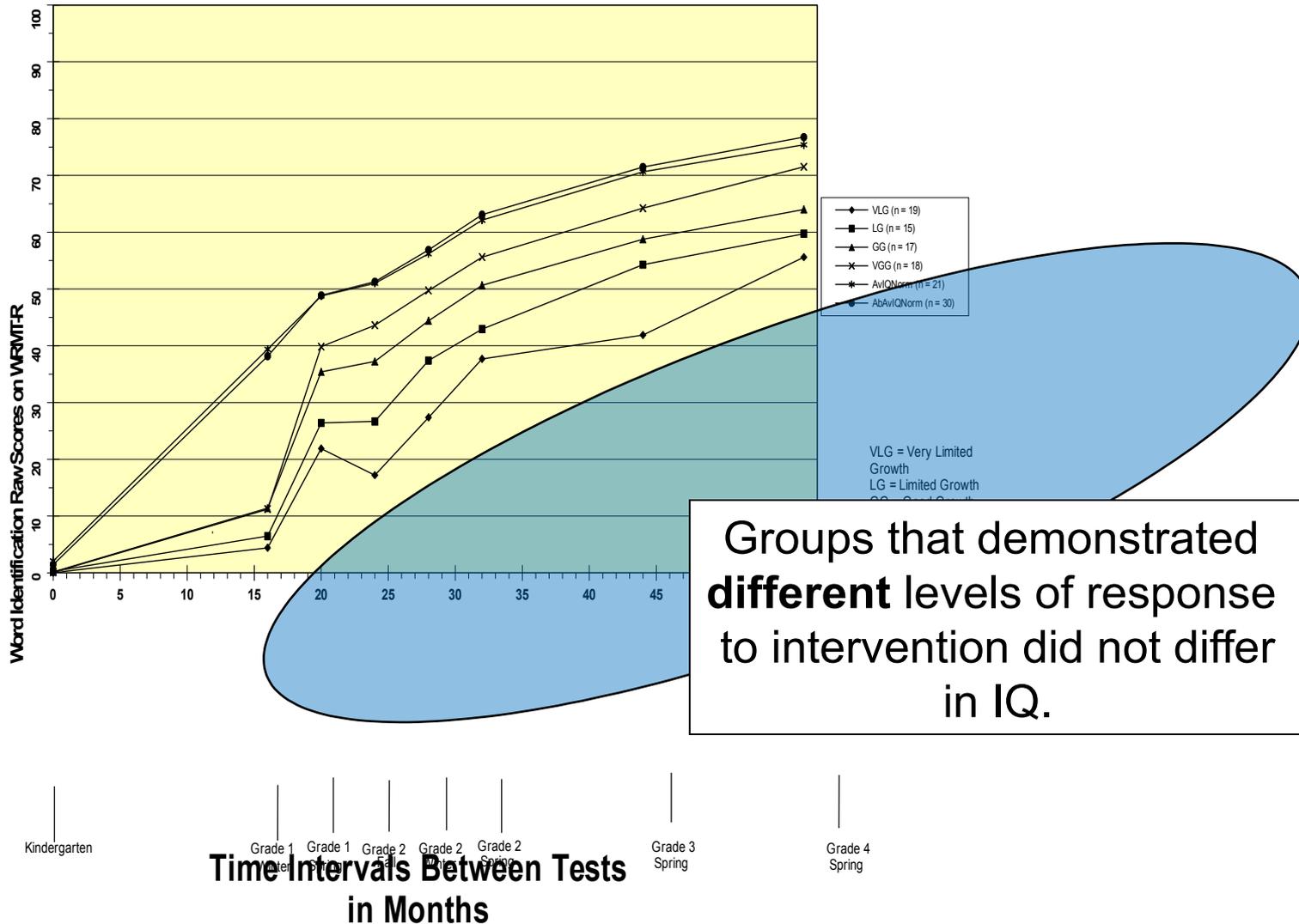
Thanks for your interest in this  
important topic.

# What is Dyslexia?

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- According to the International Dyslexia Association
  - “Dyslexia is a language-based learning disability. Dyslexia refers to a cluster of symptoms, which result in people having difficulties with specific language skills, particularly reading. Students with dyslexia usually experience difficulties with other language skills such as spelling, writing, and pronouncing words. Dyslexia affects individuals throughout their lives; however, its impact can change at different stages in a person’s life.
  - <https://dyslexiaida.org/dyslexia-basics/>

# Growth Curves for Mean Raw Scores on the WRMT-R Word Identification Subtest for Normal and Tutored Poor Readers



From: Vellutino, Scanlon, Sipay, Small, Pratt, Chen, & Denckla, 1996