Dyslexia: Definition and Intervention

Definition:

Dyslexia is generally defined as a disorder that involves difficulty in learning to read and often runs in families, but does not affect general intelligence. While there are many reasons why students may experience difficulties with reading, dyslexia is often associated with specific problems related to word identification. The following definition was adopted in 2002 by the International Dyslexia Association and is used by the National Institute of Child Health and Human Development:

> *Dyslexia is a specific learning disability that is neurobiological in origin.*
>
> *It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities.*
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> *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.*

This definition highlights the importance of primary difficulties in automatic word recognition due to weaknesses in underlying phonological processing abilities such as phonemic awareness. Phonemic awareness is directly linked to a student's ability to learn phonic word attack strategies necessary to decode unfamiliar words.

The definition also stresses that, although students with dyslexia often have reading comprehension problems, these are due to problems in "cracking the code" and reduced fluency rather than language comprehension issues. However, reduced reading efficiency can interfere with the acquisition of information typically learned through reading as well as comprehension of complex syntactic structures and academic vocabulary found primarily in written text. Students with dyslexia may also have difficulties with listening and speaking that affect reading comprehension but these language comprehension issues are not directly related to their dyslexia.

Intervention:

Reviews of the research on reading acquisition have consistently suggested that instructional approaches that are more explicit have the strongest impact on the reading growth of children at risk for reading disabilities such as dyslexia (Snow et al., 1998). The most commonly used interventions appropriate for students with dyslexia are often referred to as multi-sensory structured language approaches (more recently referred to as structured literacy approaches by the International Dyslexia Association) such as Orton Gillingham. These approaches share the following characteristics (Moats & Dakin, 2007):

- explicit presentation of concepts;
- structured and sequential order of presentation;
- multisensory stimulation (visual, auditory and tactile/kinesthetic modalities);
- intensive review and practice.

Another important issue in reading instruction for students with dyslexia involves the intensity of intervention. Because of the need for more explicit, direct instruction, students with dyslexia often need more time intensive instruction (Torgesen et al., 2001). The intensity of instruction should differ depending on the student's skills level and rate of progress. Teaching for the student with dyslexia needs to be strategic with systematic progress monitoring to determine whether or not a student should remain at their current intensity level or move to a more or less intensive level.

Lexia Reading Core5:

Lexia Core5 is a highly **structured and sequential** blended learning approach designed to create an individualized path for students of all ability levels including students with dyslexia. The model integrates online activities with teacher-led lessons to enhance instruction and paper -pencil activities to solidify skills. Core5 systematically move students through material in six areas important for balanced literacy acquisition (phonemic awareness, phonics, structural analysis, fluency, vocabulary and comprehension). The scope and sequence of the phonics and structural analysis strands are aligned to Orton Gillingham. Through this blended model, Core5 incorporates all of the characteristics of good instruction for students with dyslexia noted above.

An auto-placement tool is used to identify students' proficiency gaps and place them at a start level consistent with their reading skills. For example, a second grade student with dyslexia may place at a kindergarten or low first grade level and begin working on activities appropriate for their personal skill set. Core5 prescribes the appropriate **intensity of instruction** on a monthly basis based on student performance and rate of progress. It uses adaptive technology to include the **explicit instruction** needed to accelerate skills acquisition.

As the student works on an activity, the program provides a scaffolding system for support and instruction as necessary. If students struggle in a unit, automatic branching moves them to *Guided Practice* with fewer stimuli and more structure. If students continue to struggle, they move to *Direct Instruction* which **explicitly** teaches the skill to the students. Teachers have access to online reports that identify students who are struggling with a particular skill. Those students are flagged for teacher-led individual or small group instruction that can be provided through targeted teacher-led Lexia Lessons. Once a lesson has been presented, students can move back into the online program for **intensive review and practice**.

After completing all units in an activity, students are provided with Skill Builders – paper and pencil tasks developed to reinforce and extend the skills presented in the activity. Lessons and Skill Builders provide opportunity for use of **multi-sensory techniques** that are helpful for students with dyslexia to remember and apply the skills being presented and reviewed.

References:

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Snow, C. E., Burns, M. S., & Griffin, P. (Eds.). (1998). Preventing reading difficulties in young children. Washington, DC: National Academy Press.

Torgesen, J., Alexander, A., Wagner, R., Rashotte, C., Voeller, K., Conway, T., & Rose, E. (2001). Intensive remedial instruction for children with severe reading disabilities: Immediate and long-term outcomes from two instructional approaches. Journal of Learning Disabilities, 34, 33–5