

Research for Teachers



"This article is one of a series intended to help ETFO members become more aware of current research findings directly relevant to teaching in elementary schools."

#14 PROMOTING CURRICULUM ACCESS IN CHILDREN AND YOUTH WITH READING DISABILITIES

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Children and youth with a learning disorder (LD) are one of the most prevalent groups of students receiving special education services in Ontario (43% of students receiving services; Ministry of Ontario Special Education Update, 2012). Many students with an LD display weaknesses in reading as well as demonstrating concurrent difficulties in the area of written expression. As a large proportion of students with LD receive their education in general education classrooms, it is important for general and special education teachers to enable curriculum access for these students.

The term "curriculum access" refers to the ability of a student to *participate* in the curricular activities related to his or her grade level and *meet* age-appropriate curriculum expectations (Lee, Soukop, Little, & Wehmeyer, 2009; Soukop, Wehmeyer, Bashinski, & Bovaird, 2007). Children with reading difficulties may struggle to access the curriculum for many reasons. First, students with word reading difficulties often read less accurately and fluently than their peers; in turn, these weaknesses often constrain text comprehension (Fletcher, Fuchs, Barnes, & Lyon, 2007). These students may take more time to complete assignments and struggle to acquire pertinent information from content area texts. Students with specific comprehension deficits (i.e., those who demonstrate average or better word reading skills and below-average reading comprehension skills) are also more likely than their peers to show difficulties with comprehension of grade-level text and comprehension monitoring (e.g., Oakhill, Hartt, & Samols, 2005).

It is important for educators working with children with a reading disability to employ a range of approaches to promote curriculum access. In this article, we highlight three steps teachers can take to promote curriculum access in students with reading disabilities. The first step, universal design for learning, is a global approach that identifies strategies to use to design an accessible curriculum (Rose & Meyer, 2001); the next two steps focus on the individual student and promote access by strengthening key skills and providing bypass strategies.

Universal Design for Learning

The first step educators can take is to examine their curriculum and the methods they use to assess student progress to identify whether any barrier to learning exist (Rose & Meyer, 2002). One curriculum barrier may be the nature of the written text used to share content information. Texts vary in length, syntactic complexity, and coherence; some of these features facilitate understanding, whereas others hinder it

(White, 2012). Barriers may also exist in assessment tools. For example, a student with reading and written expression difficulties may perform poorly if the assessment requires her/him to read questions independently and provide written responses. Educators should determine whether assessments that require other modes of delivery and responding (e.g., oral) are appropriate to eliminate this barrier. They can also examine whether the acquisition of one or more of their curriculum goals is associated with a particular form of communication (e.g., students will provide a written description of the technological advances of early civilizations) or not. The inclusion of a broader range of assessment tools provides students with greater opportunity to show their understanding of content domains. There are websites where teachers can access templates they can use to identify and eliminate barriers in their curriculum (see Web-Based Resources).

Interventions

The second step is to provide students with evidence-based interventions that promote the development of their core reading-related skills. Fortunately, there is a well-developed body of research highlighting effective methods to improve word recognition and reading comprehension skills in early elementary school children with reading disabilities (Fletcher et al., 2007). In general, this instruction should be systematic in nature, explicit, and of sufficient duration and intensity to meet the needs of the students (Fletcher et al., 2007; Foorman & Torgesen, 2001). Web-based tools are available to provide general and special education teachers with important information and guidance regarding the design and implementation of interventions for students with reading and other learning difficulties.

There is also growing evidence that older elementary students (e.g., grade 4 to 6 students) with reading difficulties benefit from age-appropriate and evidence-based interventions to improve their word recognition and reading comprehension skills (e.g., Edmonds et al., 2009). A practice brief describing the findings of a recent systematic review is available from the Centre on Instruction website (Boardman et al., 2008). It highlights the need to target multiple skill domains with older students including word analysis strategies (e.g., how to identify multisyllabic words), vocabulary knowledge, reading fluency, and text comprehension. It also highlights the need to use strategies to promote students' motivation for reading.

Accommodations

The third important step is to provide students with appropriate accommodations that reduce or eliminate the impact of reading difficulties on performance. These may include low-technology tools such as advance organizers that support students' ability to understand the essential ideas in a text. Assistive technology (AT) also can provide students with reading difficulties with tools to circumvent their areas of weakness. Assistive technology is "any item, piece of equipment, or product system, whether acquired commercially off-the-shelf, modified, or customized, that is used to increase, maintain or improve the functional capabilities of individuals with disabilities" (Technology-Related Assistance for Individuals with Disabilities Act of 1988 (P.L.) 100-407). There are a range of such tools including accessible media word processing software with speech feedback, text-to-speech programs, and word prediction software. It is important for educators to consider factors such as task demands as well as student's strengths, specific needs, and goals when making decisions about AT supports (see Special Education Technology-British Columbia, <http://www.setbc.org/lcindexer/> for information about various forms of AT and decision-making supports).

When educators and schools implement these various strategies, more students can achieve success and develop the skills required by the Ontario curriculum and the demands of daily life.

Further Reading

Boardman, A. G., Roberts, G., Vaughn, S., Wexler, J., Murray, C. S., & Kosanovich, M. (2008). *Effective Instruction for Adolescent Struggling Readers: A Practice Brief*. Center on Instruction.

Edmonds, M. S., Vaughn, S., Wexler, J., Reutebuch, C., Cable, A., Tackett, K. K., & Schnakenberg, J. W. (2009). A synthesis of reading interventions and effects on reading comprehension outcomes for older struggling readers. *Review of Educational Research*, 79(1), 262-300.

Fletcher, J. M., Lyon, G. R., Fuchs, L. S., & Barnes, M. A. (2007). *Learning disabilities: From identification to intervention*. New York: The Guilford Press.

Foorman, B.R., & Torgesen, J. (2001). Critical elements of classroom and small-group instruction promoting reading success in all children. *Learning Disabilities Research and Practice*, 16, 203-212.

Lee, S., Soukup, J. H., Little, T. D., & Wehmeyer, M. L. (2009). Student and teacher variables contributing to access to the general education curriculum for students with intellectual and developmental disabilities. *Journal of Special Education*, 43, 29-44.

Oakhill, J., Hartt, J., & Samols, D. (2005). Levels of comprehension monitoring and working memory in good and poor comprehenders. *Reading and Writing*, 18(7), 657-686.

Rose, D. H., & Meyer, A. (2002). *Teaching Every Student in the Digital Age: Universal Design for Learning*. Alexandria, VA: Association for Supervision and Curriculum Development.

Soukup, J., Wehmeyer, M., Bashinski, S., & Bovaird, J. (2007). Classroom variables and access to the general curriculum for students with disabilities. *Exceptional Children*, 74, 101-120.

Technology-Related Assistance for Individuals with Disabilities Act of 1988 (P.L.) 100-407

Vaughn, S., Wexler, J., Reutebuch, C., Cable, A., Tackett, K. K., & Schnakenberg, J. W. (2009). A synthesis of reading interventions and effects on reading comprehension outcomes for older struggling readers. *Review of Educational Research*, 79(1), 262-300.

White, S. (2012). Mining the text: 34 text features that can ease or obstruct text comprehension and use. *Literacy Research and Instruction*, 51, 143-164.

Web-Based Resources

A Synthesis of Research on Effective Interventions for Building Reading Fluency with Elementary Students with Learning Disabilities. <http://www.readingrockets.org/articles/researchbytopic/4897/>

Assistive Technologies for Students with Learning Disabilities: An Overview. <http://www.readingrockets.org/article/33074/>

Center on Instruction. <http://www.centeroninstruction.org/effective-instruction-for-adolescent-struggling-readers---second-edition>

Children with Reading Disabilities (<http://www.readingrockets.org/article/223/>)

Intensive Interventions: A Teacher's Toolkit. <http://iitoolkit.rmcwebapp.com/>

IRIS Vanderbilt Modules for Special Education: Language and Literacy. <http://iris.peabody.vanderbilt.edu/resources.html>

National Center on Accessible Instructional Materials. <http://aim.cast.org/>

Special Education Technology – British Columbia, includes information about various forms of AT and decision-making supports). <http://www.setbc.org/lcindexer/>

TechMatrix: Assistive and educational technology tools and resources to support learning for students with disabilities and their classmates. <http://techmatrix.org>

Universal Design for Learning (templates to identify and eliminate barriers in their curriculum). <http://www.cast.org/>

Using Technology to Support Struggling Students: Science Literacy, Vocabulary, and Discourse (National Centre for Technology Innovation). <http://www.readingrockets.org/article/41187/>

Vaughn, S., Wanzek, J., Murray, C. S., Roberts, G. (2012). *Intensive interventions for students struggling in reading and mathematics: A practice guide*. Portsmouth, NH: RMC Research Corporation, Center on Instruction. <http://www.centeroninstruction.org/intensive-interventions-for-students-struggling-in-reading-and-mathematics>