

Chapter 22

Response to Intervention: Assistive Technologies which can Help Teachers with Intervention Programming and Assessment

Michael W. Dunn

Washington State University Vancouver, USA

ABSTRACT

Response to intervention (RTI) is a method for classifying students with a learning disability. In collaboration with pertinent school staff, the general education teacher designs interventions for students who struggle with core academic skills such as reading, writing, and/or math; the teacher or other school personnel (e.g., paraprofessionals) then implements the interventions. If students do not improve, this data is used to substantiate the students' classification with a learning disability. Providing individual or small-group interventions can pose a real challenge for general education teachers given the typical demands they face in managing a classroom. To help address this, assistive technology can provide a means for students to practice and develop skills as well as have ongoing data about their progress—without ongoing involvement by the teacher. Assistive technology can be an efficient component in the RTI process.

INTRODUCTION

Assistive Technologies Represent a Means to Help Promote Students' Learning

Teachers and students can benefit from a variety of tools to help promote learning. Pencil grips, raised-line paper to help students produce text on

the written page, and computer software to offer children practice with academic skills, all represent potentially beneficial means to promote learning—especially those who struggle with reading, writing, and/or math (Polloway, Patton, & Serna, 2005). The practice of providing students with assistive technology (AT) tools is now specified in legislation (Individuals with Disabilities Education Act, 2004), which defines AT as “any item, piece of equipment or product system, whether acquired commercially off the shelf, modified or customized, that is used

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to increase, maintain, or improve the functional capabilities of children with disabilities.” If the school team states that a student with characteristics of having a disability would benefit from AT, the school is required by law to provide it at no charge to the family.

BACKGROUND

What is a Learning Disability?

The concept of a student having a learning disability is based on the principle of a child demonstrating *unexpected under-achievement*—when a student demonstrates an ability to converse with others and have appropriate social skills, but a certain area of academics (i.e., reading, writing, and/or math) provokes great difficulty for the student (Pennington, Peterson, & McGrath, 2009). The underlying rationale stems from difficulties with both cognition (i.e., a potential for learning) and academics (i.e., demonstrating academic ability).

A student with a learning disability can demonstrate a disorder of psychological processes. In other words, a student would not process or interact with learning as other normally-achieving students would. For example, early-elementary children may not experiment with language such as making up rhyming words to create comical phrases (e.g., “Jillian Billian went to the millian to see her dillian”). Students with learning disabilities may also experience difficulties with expressive (i.e., speaking and writing) as well as receptive (i.e., listening and reading) language. Difficulties with working memory and phonemic-awareness skills could render retaining and understanding language a challenge. They may have problems decoding a word on a page, retaining the information they just heard, or storing information in the correct place within their long-term memory. Malfunctions of language and learning processes

can make understanding and applying information difficult.

In certain cases, classifying a student with a learning disability may not be appropriate. School teams may not identify children with a learning disability if their difficulties with academics can be attributed to another disability such as a hearing impairment, visual impairment, or mental retardation. It would be likely that these students would have difficulties with reading, writing, or math and adding the title of “learning disability” would not change this. To prevent reading, writing, and math needs from being neglected for a non-classified student with a learning disability, goals and objectives for these academic areas may be addressed in the Individual Education Plan with another disability classification such as hearing impairment, visual impairment, or mental retardation.

Having conceptually defined a learning disability as that of *unexpected under-achievement*, students with a learning disability need to demonstrate an ability-achievement discrepancy. Traditionally, schools have used the “wait to fail” model of learning disabilities classification. Meaning, students typically are offered the opportunity to learn to read, write, and do math and if they finish two grade levels behind by the end of third grade, special-education personnel would administer tests of academic ability and intellectual potential (i.e., an IQ test). Students who attain a discrepancy of 15 points or more between the overall scores of both tests qualify for identification with a learning disability. However, the use of IQ tests as the prime determinant for classifying students with a learning disability is a very controversial practice (Gresham, 2002).

Rationale for an Alternative Model for Learning Disability Classification

As early as the 1920s, learning disability researchers (e.g., Orton, 1925) had theorized that

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