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# Introduction

Response to intervention (RTI), differentiated instruction and technology are fundamentally changing secondary school instruction. Combined, they have an impact much greater than each factor in isolation (Bender & Waller, 2011). While RTI is used widely in primary schools, it is not as common in the upper years, and yet these students still experience large deficits in reading, writing and maths. Using all three catalysts, *RTI in Secondary Schools* walks readers through the process of adjusting the RTI structure to best serve secondary schools.

Throughout, I include real-world examples of RTI implementation in secondary schools, sample RTI documentation forms in various content areas, guidelines and lists of instructional procedures, and suggestions for lesson plans and further resources. In addition, each chapter discusses many different instructional strategies, curricula and progress-monitoring programs that address all major tasks within the core subjects. Virtually every teacher in the secondary school years can benefit from the strategies in this text. Part I introduces each of the three catalysts for change: RTI, differentiated instruction and technology.

In chapter 1, I present an overview of RTI basics, including what RTI is and what the pyramid of intervention looks like for secondary schools. I also cover common RTI elements and the role of a professional learning community, and I include a sample RTI documentation form for a year nine reading intervention in the context of an Australian history class.

Chapter 2 covers how RTI can be structured in the upper years. I present several real-world examples from across the United States for comparison along with analysis of each.

I begin chapter 3 with a discussion of differentiated instruction in secondary school classes. I present an overview of the initiative and discuss the importance of brain-compatible instruction, specifically for students who have grown up surrounded by technology. I also introduce several tools teachers can use to begin the differentiation process.

In chapter 4, I discuss practical hands-on advice for using differentiated instruction in the upper years, such as tips on modifying traditional lesson plans to include differentiated elements. I also discuss the advantage of creating various centres in content-area classrooms.

Chapter 5 introduces technology in conjunction with RTI and differentiated instruction. I explore the basic technology requirements necessary to bring technology into secondary school classrooms and provide many examples of hardware, software and lesson plan ideas.

Part II moves away from the individual catalysts and shows their combined impact in various content-area classes, specifically focusing on reading, writing and maths interventions.

Chapter 6 discusses RTI and differentiation in secondary school reading instruction. I present the challenges specific to upper years, as well as strategies, suggested curricula and monitoring tools for addressing these challenges. The chapter ends with a real-world example of how a Nevada school district approached RTI in reading instruction and a sample case study of an RTI in reading within a year nine biology class.

Chapter 7 moves on to writing instruction in the upper year levels. I explore the different types of writing assignments, various strategies to teach writing skills and supplemental curricula. This chapter ends with a sample case study of an RTI in writing in a year nine biology class.

Chapter 8 presents RTI in secondary school mathematics instruction. I discuss strategies such as peer tutoring, problem-based learning, and problem solving. I also suggest supplemental curricula and monitoring procedures. The chapter ends with a sample case study in a year ten general mathematics course.

These research-proven strategies and curricula are only a limited sample of those available, but they represent best practices. Therefore teachers should be applying these RTI procedures and differentiated instructional ideas across the board in their secondary school classes, and professional learning communities should do everything possible to facilitate this transition.

The case studies and real-world examples I present involve an array of academic deficits in various subjects. These examples are not exhaustive, of course, but they should suffice as examples of what effective, best-practice instruction now requires. Furthermore, teachers should be able to utilise the forms, examples and instructional ideas, coupled with their own curricula, to develop high-quality, effective Tier 2 and 3 interventions for their students.

I also describe many hardware, software and web-based options every modern instructional program should use (Partnership for 21st Century Skills, 2007). Of necessity, the number of programs described is limited. However, these examples illustrate how much technology has affected instruction and how it is now impacting both RTI and differentiated instruction.

RTI, coupled with differentiated instruction and increased use of technology, will very soon create classrooms that look quite different from traditional second-

ary school instruction. This book is intended to prepare all teachers for that change as well as to prepare leadership teams in the schools to guide and facilitate those changes. The excitement and energy of this three-catalyst interface in secondary school instruction indicates how technology, RTI and differentiation can and should work together to benefit all students.

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# Response to Intervention: A Catalyst for Change

Perhaps more than any other single initiative, response to intervention (RTI) is likely to restructure how secondary school teachers teach in a profound and fundamental way (Geisick & Graving-Reyes, 2008; Gibbs, 2008; James, 2010; National Association of State Directors of Special Education [NASDSE], 2006; National High School Center [NHSC], National Center on Response to Intervention, & Center on Instruction, 2010; Protheroe, 2010; Rozalski, 2009). Virtually all schools are currently implementing some form of RTI, and all secondary school teachers will be participating in this initiative in the near future; many are already doing so (Allen, Alexander, Mellard & Prewett, 2011; Duffy, n.d.; Fuchs, Fuchs & Stecker, 2010; Hoover, Baca, Wexler-Love & Saenz, 2008; James, 2010; Kame'enui, 2007; NASDSE, 2006; NHSC et al., 2010). In that sense, this innovation provides the opportunity for fertile discussions within leadership teams, as well as substantive school improvement opportunities.

The vast majority of educational institutions began their RTI efforts in the area of primary reading, and the strongest research base for RTI is in that area (Berkeley, Bender, Peaster & Saunders, 2009; Fuchs & Deshler, 2007; Fuchs & Fuchs, 2007). However, as early as 2007, educators across North America began to turn their attention to applications of RTI in middle years and secondary schools and to develop various pilot programs (Allen et al., 2011; Duffy, n.d.; Gibbs, 2008; James, 2010; Johnson & Smith, 2008; NHSC et al., 2010; Protheroe, 2010; Rozalski, 2009). Since 2008, scholars have produced several books and white papers that include information on how middle years and secondary schools are implementing RTI around the globe (Duffy, n.d.; Gibbs, 2008; NHSC et al., 2010). Since many secondary school faculties may not be familiar with RTI, I will begin with the basics.

**RTI has begun to restructure how secondary school teachers teach in a profound and fundamental way.**

## What Is RTI?

RTI is a set of systematic, increasingly intensive educational interventions designed to target an individual student's specific learning challenges and to provide a supple-

mentary intervention aimed directly at those learning challenges in order to assist the student in progressing (Boyer, 2008; Fuchs et al., 2010). However, RTI has now transitioned beyond this eligibility function. Today, RTI is not primarily a tool for identification of students with learning problems, but rather is a general education initiative to assist all students in meeting their potential (NASDSE, 2006). In fact, few students are identified with learning disabilities in the upper year levels, since most such learning problems are identified in the mid-primary grades.

**RTI is a set of systematic, increasingly intensive educational interventions designed to target an individual student's specific learning challenges and to provide supplementary interventions as necessary.**

RTI has already widely impacted primary education (Bradley et al. 2007; Fuchs et al. 2010; NASDSE, 2006). Since 2005, many primary school teachers have modified their instruction to include RTI procedures, in an effort to assist students with learning challenges (Fuchs & Deshler, 2007; Fuchs & Fuchs, 2007; National Center on Response to Intervention [NCRTI], n.d.a). As has been the case in the primary years, middle years and secondary school classes are likely to use RTI, differentiated instruction and instructional technologies together, since each of these supplement and support the others in many ways (Duffy, n.d.).

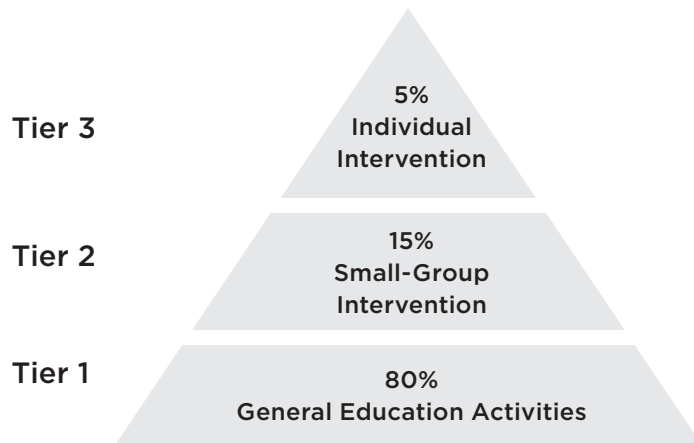
Before examining the separate catalysts, let's take a closer look at the tiers that make up RTI.

## The RTI Pyramid of Intervention for Secondary Schools

Typically, RTI models are described in terms of a pyramid of intervention divided into instructional tiers, and each tier represents a different level of intensity of instruction (Buffum, Mattos & Weber, 2009; Fuchs et al., 2010; Kame'enui, 2007; Protheroe, 2010). Approximately 73 per cent of U.S. states have adopted a three-tier pyramid model for their RTI efforts (Spectrum K–12 School Solutions, 2009). See figure 1.1.

Educators have widely applied the three-tier model in primary schools, though few authors have attempted to describe the three-tier model in the context of secondary schools. With that caveat in mind, the description that follows suggests how this model might look in the higher year levels. Tier 1 is instruction that is provided for all students in the general education classes (Bender & Shores, 2007; Buffum et al., 2009; Fuchs et al., 2010). It appears at the bottom of the model to suggest that all students participate in instruction at the Tier 1 level. As the percentages within the model indicate, however, this level of instruction typically meets the educational needs of only 80 per cent of the students in the class (Boyer, 2008; Bradley et al., 2007; Fuchs & Deshler, 2007), while the remaining 20 per cent of the class needs





**Figure 1.1: RTI pyramid.**

more intensive supplemental instruction to meet educational goals. Those estimates are based on reading instruction in the primary years, specifically from research on primary reading in programs such as Reading First, and thus these general percentages may be somewhat inaccurate in other subjects or at higher year levels (Bender, 2009a).

Some RTI proponents note that, over time, learning deficits compound and result in more students demonstrating increasing deficits in the higher year levels; thus the percentages presented in the original RTI pyramid might be underestimates (Gibbs, 2008). This suggests that Tier 1 instruction in secondary schools may not be meeting as much as 30 or 35 per cent of students' instructional needs (Gibbs, 2008). At a minimum, it seems clear that at least 20 per cent of all students in the middle and senior year levels will demonstrate academic deficits, thus more than 20 per cent of secondary students might need to progress into the more intensive RTI tiers of instruction.

**Over time, learning deficits may compound and result in more students demonstrating increasing deficits in the higher year levels; thus the percentages presented in the original RTI pyramid might be underestimates.**

## Tier 1

In the various discussions of Tier 1 instruction for RTI implementation in secondary schools, researchers strongly recommend differentiated instruction as the essential basis for RTI efforts (Duffy, n.d.; Gibbs, 2008; NHSC et al., 2010). In fact, scholars now consider differentiated instruction the most effective basis for all instruction, and educators must implement the strongest instructional model available at the Tier 1 level as the basis for RTI (Duffy, n.d.; Gibbs, 2008). As a result, these authors have strongly encouraged all secondary school teachers in every subject to implement differentiated instructional lessons in order to meet the needs of a maximum number of students in Tier 1.

Of course, at the Tier 1 level, the general education teacher provides all of the instruction in this RTI model. Thus the general education teachers must deliver differentiated instruction for large and small groups, as well as some individual assistance based on the individual needs of the students.

In addition, general education teachers (at least in the primary years) also have the responsibility to conduct universal screening assessments to identify students who are struggling (Boyer, 2008; Bradley et al., 2007; Fuchs & Deshler, 2007; Fuchs et al., 2010; Kame'enui, 2007). All students in the primary class take these screening assessments, usually a minimum of three times each year. Based on those universal screening assessments, general education teachers must then identify students who may need more intensive supplemental instruction at the Tier 2 or Tier 3 levels of the RTI pyramid (Fuchs & Deshler, 2007; Fuchs et al., 2010; Kame'enui, 2007).

**Universal screening measures assess basic skills, and schools usually conduct such screenings a minimum of three times each year.**

While most schools have applied that universal screening procedure in primary years, it is not clear from the research literature if or how they will implement universal screening in the middle and senior year levels (Duffy, n.d.; Johnson & Smith, 2008; NHSC, 2010). In fact, there is little research literature on screening procedures or other aspects of RTI implementation for secondary schools (Johnson & Smith, 2008). Therefore this question of who is responsible for universal screening assessments at the Tier 1 level is, like many other questions, still open for the higher year levels (Gibbs, 2008; NCRTI, n.d.a; NHSC et al., 2010).

Several pilot RTI implementation programs in secondary schools do, however, shed some light on how to manage this screening. Many model RTI programs use existing achievement scores or those scores coupled with teacher recommendations to help determine which students might benefit from a Tier 2 or Tier 3 intervention (Duffy, n.d.; Johnson & Smith, 2008; NHSC et al., 2010). Several of those model programs are described in detail later in chapter 2.

## Tier 2

Tier 2 interventions provide supplemental, targeted intervention for a small group of students – perhaps 20 per cent of the class – who are struggling (Boyer, 2008; Fuchs & Fuchs, 2007). Again, this percentage may not be accurate, and in the higher year levels, it is probably somewhat low, since some proponents of RTI have suggested that many more students need assistance as year levels increase (Gibbs, 2008). Using this figure as a basis, however, in a typical class of perhaps twenty-five students, one might expect that at least five or six students would be struggling enough to require a supplemental Tier 2 intervention. The good news is that Tier 2 interventions work for the majority of students, as shown by rather extensive research in the primary years. In fact, a combination of Tier 1 instruction and Tier 2 intervention typically meets the needs of as much as 95 per cent of students (Bender, 2009a).