RESPONSE TO INTERVENTION: A GUIDE TO IMPLEMENTATION FOR SCHOOL ADMINISTRATORS

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A Project Submitted to the School of Graduate Studies of the University of Lethbridge in Partial Fulfilment of the Requirements for the Degree

MASTER OF EDUCATION

Faculty of Education University of Lethbridge LETHBRIDGE, ALBERTA, CANADA

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RESPONSE TO INTERVENTION: A GUIDE TO IMPLEMENTATION FOR SCHOOL ADMINISTRATORS

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Dedication

I dedicate this to work to my mother, who read with me every day for years trying to help me overcome my reading challenges, to all the kids struggling to learn how to read that do not have someone providing extra support and to all the teachers working tirelessly to make sure that students with literacy challenges stand a fighting chance.

Abstract

When implemented with fidelity, RTI can be an effective way of identifying students in need of support, reducing wait time to receive necessary interventions and help ensure that student underachievement is not a result of incompatible instruction (Whittaker, 2013). Although RTI appears to be a viable solution to the disabilities model of learning support, the implementation process is often stifled in Alberta schools.

This project synthesized information from several sources, regarding both leadership and RTI, creating a manual that is informed by an extensive literature review. The final product consists of two distinct sections in order to serve two specific purposes – to explaining what RTI is and also how to successfully implement it. The ultimate goal of the project is to help school leadership teams develop systems to ensure that students who need extra help are quickly identified and receive needed intervention in a systematic and timely manner.

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Chapter 1: Introduction

Emerging practices in education such as data driven classroom instruction, research-based curricular programming, tiered interventions structures and progress monitoring – all coinciding to some degree with the scientific method - are reshaping how schools do business. The Response to intervention (RTI) framework encompasses all of these emerging practices. Efforts to implement systems of RTI have become an increasingly common form of school improvement in North American schools in recent years. According to Brown-Chidsey and Steege (2010) because of the accountability movement that is taking hold in public education, divisions will have to undergo a complete paradigm shift away from the medically-based disabilities model that has been in practice for decades. This shift coincides with changes in Alberta's special needs funding away from coding towards new structures based on needs, not labels. According to Burton and Kappenberg (2012) the old model of special education, "required the child to demonstrate the need for special services by allowing a gap in performance to develop over a period of time, which could run from one to two year or longer" (p. 10). When implemented with fidelity and effective screening tools are used, RTI can be an effective way of identifying students in need of support and reduce the time students wait to receive necessary interventions (Dexter, Hughes, & Farmer, 2008; Gibbons, 2008; Hammer, 2012; Maskill, 2012; Whittaker, 2013). Searle (2010) adds that it also serves as a method to ensure that student underachievement is not a result of incompatible instruction. However, over three decades after Deno and Mirkin published their first work on DBPM, RTI is just now beginning to play a significant role in transformational educational change across North America. According to Bender and Waller (2011),

"Approximately 73 percent of the states have adopted the three-tier pyramid" (p. 7). This is evidence that we are heading in the right direction, but we still have a long way to go.

Although RTI appears to be a viable solution to the wait to fail model in which students wait until a significant achievement gap has developed before access to needed interventions is provided, there are two major problems that are stifling its integration into Alberta schools.

The first problem is that many educators do not fully understand what RTI is. Although many of its components, such as the pyramid of interventions have become popular, other components of RTI remain in obscurity. Key components of RTI that can be implemented ineffectly, or in some cases, not at all include: schoolwide benchmark screening, a multi-tiered intervention program, progress monitoring and a systematic response plan to resulting data. If school leaders don't clearly understand what RTI is and what it entails, how can they possibly implement it as it was intended (Searle, 2010)?

The second problem is that the actual process of implementing RTI can be a daunting, if not a seemingly impossible, task for school leaders. Most Alberta schools now have some components of RTI in place. The most common component, the popularized pyramid of intervention, is often used in school learning support and grade level meetings. However, there are very few schools that have been able to implement all of the components of RTI with fidelity as the researchers who designed it intended. Brown-Chidsey and Steege (2010) describe the importance of implementing RTI with fidelity and in its entirety as paramount to achieving the desired outcomes. Although most school administrators and system leaders already know the importance of fidelity, when implementing school improvement initiatives, they fail to implement RTI in its

entirety because of the scope of the change. As Margaret Searle describes, RTI is not a system that can simply be purchased. It is a system wide structure for organizing and coordinating school resources and efforts to improve student success rates (2010). RTI requires a paradigm shift away from special education structures, which have existed for decades, towards a proactive method of targeting areas of need accurately and quickly. This type of disruptive, transformational change can seem impossible to implement, especially in resistant organizations where even minor adjustments in practice can prove to be difficult to engineer.

Building a pathway to overcoming these problems that commonly stifle RTI implementation form the foundation of this project, which has two specific aims:

- To provide a clear, concise explanation of what RTI is, where it came from and what components form its structure.
- Provide change leaders with, research based, implementation guidelines for introducing RTI to ensure success.

Rationale: The Need for Change

Considering that Alberta has a world class public education program that receives relatively plentiful allocations of resources, there remain several issues with current special education systems throughout the province. There is a lack of consistency in the Alberta education system to ensure commonality of reporting and effectively delivering supports in the special education. Perhaps, part of the reason for this is that the system does not have a clear set of checks and balances to ensure that struggling students receive the help they need before it is too late. Alberta is far from alone when it comes to failing to meet the needs many of our students. For decades public educations systems have required students to demonstrate the need for intervention by allowing performance deficits to develop over the course of months or even years (Burton and Kappenberg, 2012). By then, the ability gap is often so great that remedial action does not yield great enough benefits to put the student back on par with their peers. This *wait-to-fail* model that has pervaded public educational systems world-wide, has proven insufficient in addressing the issues of late identification and inadequate support structures when dealing with students who have diverse learning needs. Consider the following facts about public education in Alberta: 40% of Albertans aged 16 or older scored below a level 3 out of those adults who participated in the International Adult Literacy Survey (Government of Alberta, 2014). Level 3 is equivalent to the level of literacy needed to obtain and use information effectively. The national average was reported to be even lower with 48% of Canadian s over 16 scoring below a level 3 (Government of Alberta, 2014). As Alberta schools move towards models of increased accountability, it has become apparent that public education can no longer focus on the typical learners while allowing the 'different' students to fail. We need to find ways to make school work for everyone. Students that graduate from school with strong literacy skills have increased access to opportunities in the global marketplace with increased probability of a good quality of life (Edmonton Social Planning Council, 2012). When the very quality of life of our students is on the line, the stakes couldn't be higher. Educators need to move towards responsive methods of addressing the diverse learning needs of all of their students.

Fortunately, compelling evidence it is compelling to school leaders in the sense that it offers a possible improvement to traditional special needs protocols that allow performance deficits to develop over time before intervention takes place. shows that Response to Intervention (RTI) can be an effective method of giving every student the additional time and support needed to learn at high levels (Dexter, Hughes, & Farmer, 2008; Gibbons, 2008; Hammer, 2012; Maskill, 2012; Whittaker, 2013). Gibbons (2008) describes the changes that took place in the Chisago Lakes School District from the period 1996 to 2007 following the introduction of RTI in 1995. Gibbons insists that the percent of students meeting benchmark target literacy scores rose from 35 to 70.

Gibbons also states that: In addition, the percentage of students reaching the grade-level standard on the statewide assessment increased from 51 percent at the model's inception to 80 percent in 2005. This is a slightly faster increase than that of the state overall. Finally, the percentage of students identified as learning disabled has dropped dramatically over the past decade, by 50 percent. (p. 13).

A more recent study conducted for the U.S Department of Education showed similar findings. Although there was a statically significant negative correlation between students receiving tier 2 and 3 intervention programs who were close to the grade level cut score, Balu et al., (2015) state that "recent studies support the conclusion that welldesigned and closely monitored supplemental reading interventions provided in a smallgroup setting (either within small groups or one-on-one) could be beneficial to earlygrade readers in terms of improving their specific reading skills." (p. 97). Adding to the body of research that supports a statistically significant correlation between RTI implementation and increased student performance are the results of the meta-analysis conducted by Dexter, Hughes, Farmer and Thomas (2008). Dexter, Huges, Farmer and Thomas (2008) state that "Each study examining the impact of an RTI program on academic achievement or performance included results that showed some level of improvement, with the auditors attributing the changes to the RTI approach that was used" (p. 6).

Response to intervention models are designed to be far more proactive (in comparison to traditional educational models), promising to quickly identify at-risk students and provide needed supports. "Response to Intervention (RTI) is a researchproven framework with potential to create enduring improvement in schools" (Edmonton Regional Learning Consortium, 2015). Another major reason for the increased interest in an RTI approach has been the abundance of research on reading difficulties, in particular, the national network of research studies coordinated by the National Institute of Child Health and Human Development. These studies provide a clear link between early intervention and increased literacy rates. With mounting evidence demonstrating that our system of serving students with diverse learning needs must undergo transformation, RTI provides perhaps the most comprehensive and promising alternative. Brown-Chidsey and Steege (2010) affirm this consensus while concisely asserting why RTI is of growing interest in many school and school divisions. They contend that although RTI is still a relatively new pedagogical practices, it may offer the best possible method of ensuring that all children succeed to the best of their abilities.

Although there are several studies that demonstrate compelling evidence that RTI can significantly improve student performance results many researchers point out that there are limitations to this research. First, every model of RTI will vary to some degree based on demographics, screening and intervention program selection, school timetable, staff commitment and the degree of implementation fidelity (Dexter, Hughes, & Farmer, 2008). Adding to the difficulty researchers are faced with when trying to arrive at conclusive findings regarding the effectiveness of RTI is the lack of longitudinal studies where a control group exists (Balu, Zhu, Doolittle, Schiller, Jenkins & Gersten, 2015). The limited availability of quality data makes it difficult for researchers to explore hypotheses related to factors influencing the effectiveness of RTI and make establishing correlation between intervention and student performance difficult. Hughes and Dexter's meta-analysis of the field studies conducted on RTI (n.d.) found the following:

there is emerging evidence that a tiered early intervention approach can improve the academic performance of at-risk students. These findings are qualified, however, due to the use of research designs and procedures that hinder the degree the outcomes can be associated with the intervention programs, especially for "existing program" studies. Others have noted these limitations of RTI field study research [including] Burns et al, 2005; Fuchs et al, 2003; VanDerHeyden et al., 2007.

Many researchers characterize the evidence regarding the effectiveness of RTI as emerging. More quality longitudinal studies are needed before concluding that RTI will result in increased student learning across school context. Huges and Dexter (n.d.) state that "in addition to research on the efficacy of RTI, examination of factors necessary for developing and sustaining RTI is also needed to assist educators as they consider adoption of this approach"(p. 28). Although RTI is a complex program requiring further research, Hammer (2012) insists that "In any case, RTI seems to be an innovation worth additional research and development. It could help reduce unneeded placements of students in special education programs, reducing costs and freeing up resources for children who truly need services" (p. 10).Educational jurisdictions throughout the province are aware of the need to move beyond the wait-to-fail model of learning support, as mentioned earlier, this transition can be extremely difficult to make and RTI implementation could be the most viable alternative to making school improvement a reality. It is the intent of this project to serve as an implementation tool kit and road map for schools and school divisions that choose to implement RTI.

Project Description

This project synthesized information from several sources regarding both leadership and RTI creating a manual that is informed by an extensive literature review. The stand-alone manual is intended to assists educational leaders in the process of implementing RTI programs within their schools. The final product consists of two distinct sections in order to serve two specific purposes – to explaining what RTI is and also how to successfully implement it. The ultimate goal of the project is to help school leadership teams develop systems to ensure that students who need extra help are quickly identified and receive needed intervention in a systematic and timely manner.

The manual titled, Response to Intervention: A Guide to Implementation for School Administrators, provides a clear description of the four crucial elements that make up a comprehensive RTI structure and outlines their function within the structure. Understanding the four essential components will allow change leaders to vividly understand what their end goal will look like and therefore help facilitate the implementation process. The four essential components, outlined in the manual include: 1) a system of schoolwide screening against achievement benchmarks. 2) A tiered intervention system for students identified as not meeting achievement benchmarks. 3) A progress monitoring system that includes a pyramid of interventions visual organizer. 4) Built-in collaboration time for structured grade level and learning support team meetings with the purpose of ensuring both the effectiveness and delivery of interventions. The first section of this project clearly defines what RTI is and outlines all of its components. This objective was met within the literature review where a wide array of sources, detailing what RTI is, were analyzed in order to craft a concise explanation of RTI. The second section of the manual houses a synthesis of research regarding leadership skills that can be applied to smooth the implementation process. As many administrators will confirm, implementing something as disruptive and transformational as RTI, is often a difficult process that can strain school resources and staff relations. The leadership skills contained in the second section of the manual were designed to be applied, to each step of the implementation process, to help alleviate much of the system strain and resistance that is common place during program implementation or reform efforts in Alberta schools.

Chapter 2 Literature Review

The literature reviewed for this project is designed to provide a thorough understanding of the Response to Intervention framework and all of its components. Its critical purpose is to explain how and why RTI can be implemented for the purpose of improving student performance. The information compiled in this literature review is also meant to provide a basis for the construction of a manual to guide the implementation of RTI systems in schools. In the Alberta public education system where 40% of adults scored below a level 3 (the basic literacy level needed to obtain and effectively utilize information) RTI is a possible solution to improve quick identification and support for struggling students in need of intervention (Government of Alberta, 2016).

The literature review is organized into specific components for two reasons. First, when dealing with a topic as substantial and involved as RTI structures it is necessary to break things down into thematically organized groupings in order to make the material practicable to work with. Secondly, most of the literature about RTI systems makes reference to three convergent components. These areas of particular attention embrace the three following themes: a definition of RTI, the role of assessment data in RTI systems and the multi-tiered structure of increasing intensity of instruction and intervention. The literature review has been organized into the sections, and subsections, listed below.

- 1. A definition of RTI, an understanding of its origins and how it fits with contemporary educational policy.
 - a. How did RTI come about?
 - b. What is RTI?
- 2. The role of assessment and data in RTI systems
 - a. Universal Screening and Benchmarking
 - b. Progress monitoring

- c. Data and Interventions
- 3. The multi-tiered structure of increasing intensity of instruction and intervention
 - a. The Pyramid of Interventions
 - b. Tier 1
 - c. Tier 2
 - d. Tier3

To complete the literature review for this project, a pool of carefully selected sources was collected and reviewed using specific search terms. Using the University of Lethbridge online library service the search terms "response to intervention" was used to find general sources. This search was further refined by filtering by content types including: dissertations, full text, peer reviewed. Sources were further filtered introducing advanced search terms such as: origins, history, effectiveness, meta-analysis, case study and implementation. The search resulted in various sources include books, government reports, reports from private organizations, articles in academic journals, dissertations and projects. To further refine the search results the University of Lethbridge Library education database system was leveraged and a search was conducted including, but not limited to, the following databases: Education Research Complete, ProQuest Education Journals, ERIC, Academic Search Complete and the Library and Teacher Reference Center (TRC). This search produced numerous articles that were published in academic journals which were then further filtered by date. The results of this search provided the basis of knowledge that informed the literature review for the main component of this project which is concerned with informing stakeholders about the origins and key components of comprehensive and effective RTI programs.

| Search Terms | Purpose | Database | Source by Type | Results |
|---------------|---------------|----------------------|----------------------------|--------------|
| Response to | Gather | Education | Academic Journals 2 018 | 2044 peer |
| interventions | general | Research | Magazines 308 | reviewed of |
| (full text, | information | Complete | Reviews 49 | 2404 total |
| English) | about RTI | | Conference Papers 15 | sources |
| | and begin | | Trade Publications 14 | |
| | compiling | | Books 1 | |
| | sources to | ProQuest | Scholarly Journals 1 864 | 1802 peer |
| | inform the | Education | Dissertations & Theses 824 | reviewed of |
| | literature | Journals | Trade Journals 172 | 3024 total |
| | review | | Other Sources 68 | sources |
| | | | Newspapers 50 | |
| | | | Magazines 31 | |
| | | | Reports 8 | |
| | | | Conference Papers & | |
| | | | Proceedings 4 | |
| | | | Working Papers 2 | |
| | | ERIC | Academic Journals 1 464 | 1503 peer |
| | | | ERIC Documents 362 | reviewed of |
| | | | Magazines 76 | 1902 total |
| | | | Educational Reports 49 | sources |
| | | | Books 1 | |
| | | Academic | Academic Journals 6 451 | 6521 peer |
| | | Search | Magazines 326 | reviewed of |
| | | Complete | Trade Publications 44 | 6870 total |
| | | | Book Reviews 30 | sources |
| | | | Newspapers 6 | |
| | | | Books 3 | _ |
| | | University | Book / eBook 75 859 | 5 peer |
| | | of | Book Chapter 3 498 | reviewed of |
| | | Lethbridg | Conference Proceeding 16 | 75 996 total |
| | | e and | Dissertation/Thesis 41 | sources |
| | | Teacher | Electronic Resource 5 | |
| | | Resources | Government Document 25 | |
| | | Centre | Journal / eJournal 4 | |
| | | Catalogue | Kit I | |
| | | | Paper 21 | |
| | | | Publication / | |
| | | | Video Recording 5 | |
| | | | Video Streaming 45 | |
| Oniging of | Cather | Education | web Kesource I | 207 |
| Origins of | Gather a | Education Descert | Academic Journals | 29/ peer |
| intervention | literature to | Complete | 20/ Magazinas 14 | 221 total |
| mervention | inform how | Complete | Daviawa 12 | 521 total |
| | 11101111 110W | | INCOLOWS 13 | sources |

| (full text, | and why | | Newspapers 3 | |
|---------------|-----------------|-----------|----------------------------|-------------|
| English) | response to | | Books 2 | |
| | intervention | | Trade Publications 1 | |
| | was created | | Conference Papers 1 | |
| | | ProQuest | Scholarly Journals 8 | 8 peer |
| | | Education | Dissertations & Theses 3 | reviewed of |
| | | Journals | Reports 2 | 13 total |
| | | | | sources |
| | | ERIC | Scholarly Journals 1 | 1 peer |
| | | | | reviewed of |
| | | | | 1 total |
| | | | | sources |
| | | Academic | Academic Journals 5 | 5 peer |
| | | Search | | reviewed of |
| | | Complete | | 5 total |
| | | - | | sources |
| Effectiveness | Gather a | Education | This Boolean/phrase | |
| of response | body of | Research | rendered no valid sources | |
| to | literature that | Complete | | |
| intervention | informed the | ProQuest | Scholarly Journals 210 | 202 peer |
| (full text, | literature | Education | Dissertations & Theses 153 | reviewed of |
| English) | review | Journals | Other Sources 5 | 377 total |
| | regarding the | | Trade Journals 5 | sources |
| | effectiveness | | Conference Papers & | |
| | of response | | Proceedings 1 | |
| | to | ERIC | Academic Journals 18 | 19 peer |
| | intervention | | ERIC Documents 9 | reviewed of |
| | programs | | | 27 total |
| | | | | sources. |
| | | Academic | Academic Journals 116 | 116 peer |
| | | Search | Magazines 4 | reviewed of |
| | | Complete | | 120 total |
| | | | | sources |

Table 1. Search Results by Database. This table provides a breakdown of search results that were produced during the literature review process.

In addition to the databases in table 1, Google was utilized to find other sources using the same search terms listed above. Using the search term, response to intervention in Google, yielded in addition of 213 000 000 results with approximately 3 960 000 scholarly being listed. By carefully filtering through search results to isolate valid sources, a body of literature was formed that became the corpus of the literature review. When searching with Google, only the first five pages of listed results were considered. This helped eliminate invalid sources while keeping the potential pool of sources limited to a manageable size. With the exception of sources regarding the history of RTI, articles, books, and other sources more current than 2010 were given priority. To gain an understanding of the basic components and functions of RTI programs, books written specifically about RTI were sourced from the University of Lethbridge Library. These books became the main sources of general information regarding RTI in the literature review and a substantial portion of the manual. More specific information pertaining to the history, effectiveness and implementation of RTI were sourced from articles from the various databases listed above. A combination of source types with a range of publication dates were used to inform the section of the literature review devoted to explaining the history of RTI. A comprehensive picture of the precursors and government initiatives leading to the creation and widespread adoption of RTI in the United States was created through the use of a wide array of sources.

Perhaps the most rigorous filtering of sources was afforded to the body of literature that informed the section of the literature review aimed at determining the effectiveness of RTI. Both case studies and meta analyses were included. Particular attention was paid to the methodology of the included studies. Of main concern was that the researchers were responsible for determining the level of implementation fidelity of the RTI programs at case schools in the majority of the studies selected for inclusion in this literature review. Douglas, Hughes and Farmer (2008) stress the importance of researchers using rubrics or other systematic methods to measure RTI implementation fidelity to ensure the quality of case school used in effectiveness studies. Bender and Waller (2011) insist that schools falsely claiming to have fully functioning RTI programs are on the rise due to state and federal pressure to implement RTI following IDEA 2004. Studies that do not use researcher instruments to ensure RTI implementation fidelity suffer from possible confounds associated with program inconsistency. The research of Maskill (2012) showed that proper use of RTI was an effective tool to raise student individual and overall reading scores when students were exposed to a high-quality, research-based reading program and effective interventions. However, as Maskill found, this student success was dependent on all of the components being in place and the use of a school-wide model. The importance of using relevant sources with strong methodology and pedagogical process was of primary concern during the creation of the corpus that informed the literature review for this project.

A second pool of literature was assembled regarding effective leadership and implementation strategies. The second round of information gathering was intended to gather information needed to create a synthesis of current and highly recognized publications on organization leadership and included publications by the following authors: Peter Senge, James M. Kouzes, Barry Z. Posner, James C. Collins, Steven Covey, Daniel H. Pink, Simon Sinek, Amy Cuddy, the Vital Smarts Network, Terry Small and Seth Godin. The purpose of reviewing these publications was to isolate key leadership strategies that can help educational leaders remove obstacles to change during school improvement initiatives. Many of the books leadership books read for the purposes of this literature review were recommended by the former superintendent of Livingstone Range School Division. Influencer (2013) written by Grenny, Maxfield, McMillan, Patterson & Switzler was recommended for this project by University of Lethbridge Professor Pamela Adams. In fact most of the books that have informed the leadership section of this literature review have been personally recommended, or were books that I personally found to be of great value in my own experience as a school principal.

In order to extend the body of literature beyond what was already familiar leadership websites such as: businessinsider.com, ceo.com, inc.com and Harvard Business School Online, were used to conduct a search for influential books written on the topic of leadership strategy. All of these sights provided a list of recommend leadership books. These list were used to isolate sources that housed strategies that could be particularly useful during change management and implementation. Information pertaining to shared vision, influence, motivational strategies, creating motivation, fostering change, change implementation, change initiatives and leadership strategies was isolated within these sources, summarized and compiled. The resulting information provided the basis for the leadership strategies included in the manual that are aimed at assisting administrators with the RTI implementation process.

The History of Response to Intervention

Although RTI is a relatively new movement, its roots began to take hold more than three decades ago. Burton and Kappenberg (2012) claim that the roots of RTI were formed in the USA following the proclamation of the Education for all Handicapped Children Act (EAHCA) of 1975, which spurred a tremendous movement of research into the instruction of children with special needs. However, it was this same movement that

spawned the discrepancy model in which a child had to develop a performance gap over a significant period of time in order to qualify for special services (Burton & Kappenberg, 2012). Searle (2010) suggests that even though research had demonstrated that early interventions were far more effective than remedial efforts performed after gaps were allowed to become severe, the discrepancy model was commonplace. Searle also points out that disproportionate numbers of visible minorities, English language learners and disadvantaged students were misidentified as having learning disabilities. This so-called 'wait to fail' model troubled forward thinking researchers and educators alike. Burton and Kappenberg (2012) insist that it inspired a search for a more proactive approach using the scientific method to increase the timeliness and effectiveness of special education. This was around the same time that Stanley Deno and Phyllis Mirkin published the first research on data based progress monitoring (DBPM) (Burton & Kappenberg 2012). This study seems to signal a first movement towards the use of the scientific method of data gathering, and probably stands as the precursor to the RTI model. Former professor of Education Psychology at the University of Minnesota, Stan Deno, developed curriculumbased measurement (CBM) in the late 1970s with the purpose of providing teachers assessment practices that could be used to determine student progress towards grade-level benchmarks (Curriculum Based, 2005). Deno and Mirkin published Data-based Program Modification: A Manual in 1977, which may have been the first literature focused on the effectiveness of a three tiered model of intervention to help struggling readers (Brown-Chidsey & Steege, 2010). Even before this, Deno had developed at multi-tiered structure of increasingly small group size and intensity of instruction he referred to as the "cascade" model (Deno, 1970). Although Deno and Mirkin did not propose a complete

vision of the RTI framework, the foundational pieces were apparent in their works. This paved the way for scaffolding of the additional pieces of the RTI system, resulting in the robust and comprehensive system of RTI that exists today.

Another early research project, in the move towards data-driven progress monitoring was conducted by J. R. Bergan that same year (1977). Bergan's classic work titled: *Behavioral Consultation*, focused on the problem-solving model for behavioral interventions including progress monitoring. Bergan's ideas were very similar to those of Deno and Mirkin and seemed to outline the trend towards data driven instruction that was taking place in small pockets among educational researchers and, more commonly, in the realm of psychological counseling.

Deno's cascade model became the framework for special education between 1970 and the 1980s. While it solidified a basis for special education, it resulted in significantly increased special education referrals. Two movements developed beginning in the latter half of the 1980s aimed at decreasing the number of students in special education; they helped paved the way for RTI. The regular education initiative (REI) was aimed at reducing the number of students in special education (Ackerman, 1987). Instead of assuming that all students with disabilities would need separate specialized teaching, the REI effort pushed teachers and administrators to keep as many children in their original classrooms as possible (McLeskey & Skiba,1990, as cited in Brown-Chidsey & Steege, 2005). A second movement, referred to as the "inclusive education" movement, was much more student-centered and had deeper and longer lasting ramifications. It began to take hold in the early 1990s. Both movements served as precursors to RTI, but failed to include Deno's work because they failed to use empirical evidence or data (Brown-Chidsey and Steege, 2010).

The model of the instructional consultation team was first proposed by Sylvia Rosenfield in 1989. It shared many characteristics with current day models of instructional teams including teachers as major proponents of the team and utilization of the strength based approach (Burton and Kappenberg, 2012). Rosenfield's research helped promulgate the current model of RTI problem solving teams, which analyze universal screening results and progress monitoring data to discern who is in need of intervention, which interventions need to be implemented, and when interventions need to be augmented or changed (Burton and Kappenberg, 2012).

"From 2002 to 2010, policy makers and local educational leaders searched for a way of applying the methods of scientific research to the challenge of improving the way children learned" (Burton & Kappenberg, 2012, p. 10), that was also inclusive and child focused. Addison and Warger (2010) point to No Child Left Behind of 2001 and Individuals with Disabilities Education Act of 2004 as legislative influences on the wide-scale implementation of RTI. Burns and Gibbons (2012) also claim that the reauthorization of IDEA in 2004 was a precursor to the popularity of RTI. Bender and Shore (2012) attest to this as well: "With the passage of the Individuals with Disabilities Education Improvement Act, the federal government officially allowed students to be classified as learning disabled based on documentation of how well they respond to interventions – a procedure commonly referred to as RTI" (p. 1). This is also confirmed by Stoehr, Banks and Allen (2011), who write "RTI is a general education initiative that was written into the Individuals with Disabilities Education Act in 2004 to offer

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educators a framework in which to structure early intervening services and meet the needs of all students" (p. 69). In 2004 IDEA change the way that students were diagnosed with specific learning disabilities. Schools were now responsible for proving that prior to referral, the child was provided with specific instruction and appropriate learning opportunities. According to the Council for Exceptional Children, "Since 1975, the number of children identified with SLD has doubled and more than 50% of students receiving special education services are classified with SLD (sever learning disabilities)" (Burton & Kappenberg, 2012, p. 86). Evidence based instruction coupled with performance data is now needed to substantiate a claim of SLD. The aim of using data as evidence is twofold; first, to decrease the number of students diagnosed with SLDs and, secondly, to improve core instruction. Addison and Warger (2010) also suggest that policies leading to RTI were a reaction to the overrepresentation of minority students in special education, changing general education and special education; and access to academic monitoring tools. Bender and Shores (2012) emphasize that RTI was deliberately aimed at combating the over diagnosis of learning disabilities which in 2003 was deemed, by a national survey, to be well above 5% of the general population.

Another aim of RTI propagating legislation was to reduce wait times before students received interventions. McPherson and Burton (2012) explain that, before RTI, performance gaps were often allowed to increase to two years before evaluation processes - let alone remedial efforts - were initiated. IDEA prohibited the use of the discrepancy model and emphasized evidence based instruction to meet the needs of all students within inclusive settings. A push for some form of early intervention system at the turn of the century led to the Department of Education becoming a strong advocate for RTI for what has been, now, well over a decade (Burton & Kapenberg, 2012). Burke and Kappenberg (2012) explain that the National Reading Panel, "was the first federal agency to explicitly recommend that the need for individual evaluation is best fulfilled by regular progress monitoring, as outlined with the method now known as response to intervention" (as cited in Burton & Kappenbeg, 2012, p. 73).

Over three decades after Deno and Mirkin published their first work on DBPM, RTI is playing a significant role in transformational educational change across North America. According to Bender and Waller (2011), "Approximately 73 percent of the states have adopted the three-tier pyramid" (p. 7).

RTI defined: What is RTI?

When initiating any school improvement effort, it is important for all stakeholders to clearly understand what is being changed and why. Because RTI is such a complete framework, it requires the total alignment of all resources and personnel if it is to be implemented effectively (Burton & Kappenberg 2012). RTI requires entire system commitment to create transformational change (Seale, 2010). Although an individual or team may be given a certain role within the RTI structure, it is recommended that RTI be implemented as a Professional Learning Community (Bender & Waller, 2011), requiring all members of a school community to be stakeholders. They need to understand what RTI is, why it is being implemented and what role they will play in its implementation.

RTI is based on a very simple premise: all children can learn. The goal of RTI is to improve instruction and educational outcomes for all students. Its foundation is three fold: providing high-quality instruction to students; using reliable and valid data to make decisions, and preventing rather than fixing student failure. (Burton & Kappenberg, 2012, p. 197)

Perhaps the most important aspect of RTI is that it is not just a school improvement effort; it is a system transformation from a *wait to fail* model to a proactive method of targeting areas of need accurately and quickly. According to Brown-Chidsey and Steege (2010) staff members will have to undergo a complete paradigm shift away from the medically-based disabilities model that has been in practice for decades. This shift coincides with changes in Alberta's special needs funding from coding towards new structures based on needs, not labels. According to Burton and Kappenberg (2012) the old model of special education, "required the child to demonstrate the need for special services by allowing a gap in performance to develop over a period of time, which could run from one to two year or longer" (p. 10). These authors are convinced that RTI is a highly effective way of identifying students in need of support and greatly reducing the time students wait to receive necessary interventions. Searle (2010) adds that it also serves as a method to ensure that student underachievement is not a result of incompatible instruction. RTI structures proactively isolate students at risk, ensuring that needed help is provided as quickly as possible. Burns and Gibbons (2012) insist that this change is a necessary one that coincides with the accountability movement that currently predominates public education in North America. These authors report that RTI utilizes a combination of intervention and assessment to deliver instruction that, when implemented correctly, will stop students who are considered to be at risk from falling through the cracks. Fisher and Frey (2010) concur noting that, "response to Intervention, as referenced in the Individuals with Disabilities Education Improvement Act of 2004

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(IDEIA), was conceived as a method to ensure that students receive early intervention and assistance before falling too far behind their peers" (p. 16). All definitions of RTI insist that it is a system of quickly identifying deficits and delivering supplementary instructional support in response to perceived gaps. By way of universal screening conducted at three deliberately selected times a year (September, January and May), RTI compares the performance of the entire student body against benchmark standards. This allows school teams to determine who is in need of more targeted, intensive instruction before performance gaps become too apparent (Searle, 2010).

Not only does the RTI structure include methods for early targeting of students in need, it also includes protocols to help determine if and how well interventions are working. RTI is a method of educational decision making that provides the information and flexibility educators need to offer the most effective instruction possible. Burton and Kappenberg (2012) assert that, "RTI does not provide the educational interventions that will help students learn; it provides a method of deciding when an intervention is working and when it needs to be changed" (p. 2). This method of identifying a student's response to specific intervention utilizes regularly collected data which is systematically analyzed by team members. When an intervention is not producing desired results modifications must be made.

Differentiation and personalization of instruction are key aims of RTI. It is a comprehensive system that provides a means for identifying, tracking and resolving learning difficulties, allowing for needed differentiation and personalization of programming within inclusive classrooms. RTI is combines best practice classroom pedagogy and assessment methods to ensure that when students do not succeed when provided one set of instructional methodologies they will be exposed to other methodologies that may illicit desired results. Bender and Waller insist "RTI may be defined as a set of systematic, increasingly intensive educational interventions that are designed to target an individual student's specific learning challenges and to provide a supplementary intervention within the context of the general education class" (2011, p. 6-7).

All definitions of RTI suggest that targeted, precise differentiation serves the goal of applying the scientific method to determine the effectiveness of a particular intervention or instructional method on individual students. The importance of the scientific method, and evidence-based instruction, is made clear as so many researchers affirm that these are key elements of effective RTI systems. The scientific method, in terms of RTI, is a systematic process of applying interventions to bolster student learning, followed by observation and measurement of student performance. Data resulting from progress monitoring then informs teachers and administrators allowing them to modify, change or discontinue intervention. The process of modifying and changing interventions, analyzing resulting data and responding with modification to maximize student learning intrinsically ties RTI to the scientific method. Burton and Kappenberg (2012) describe RTI as, "a form of scientific method applied to making decisions about the educational programs of individual children" (p. 6). Bernhard and Herbert (2011) describe the focus of RTI, "... to make our systems, our schools, and our classrooms more responsive to the demonstrated instructional needs of students, and to match those demonstrated needs with evidence-based, effective, instructional intervention to prevent failure" (p. 13). Burns and Gibbons (2012) also emphasize the importance of using data analysis as a central

component of RTI: they propose "Response-to-intervention (RTI) is the systematic use of assessment data to allocate resources most efficiently in order to improve learning for all students" (p. 1). By providing a database of student performance assessments and corresponding interventions, RTI helps identify and provide needed supports for students struggling academically or emotionally/behaviorally.

Another component that is frequently included in convergent definitions of RTI is the tiered structure of organizing interventions based on increasing intensity. Bender and Waller (2011) explain that "RTI may be defined as a set of systematic, increasingly intensive educational interventions that are designed to target an individual student's specific learning challenges and to provide a supplementary intervention within the context of the general education class" (p. 6-7). Addison and Warger (2010) share a similar vision, proposing that "Response to Intervention, or RTI, is a school improvement system characterized by effective core instruction, a multitier system of supports, databased problem solving, progress monitoring, and universal screening" (p. 1).

The National Education Association highlights this stratification of intervention intensity in its definition:

Response to Intervention (RTI) is a tiered approach to the early identification and support of students with learning and behavior needs. The RTI process begins with high-quality instruction and screening of all the children in the general education classroom. As a result of this screening process, struggling learners are provided with interventions at increasing levels of intensity to accelerate their rate of comprehension. These services are often provided by a variety of personnel, including regular classroom teachers, special educators, and specialists. Students are closely monitored to assess both their rate of learning and level of performance. (*Research Spotlight*, n.d., p. 1).

The RTI Action Network published a similar definition, one that included hierarchical intervention intensiveness. "Response to Intervention (RTI) is a multi-tiered approach to help struggling learners. Students' progress is closely monitored at each stage of intervention to determine the need for further research-based instruction and/or intervention in general education, in special education, or both" (*What is RTI*?, n.d., p. 1). Burton and Kappenberg (2012) concisely explain how data, multi-tiering and the scientific method work in combination,

RTI is a multi-tiered approach to identifying and supporting students with learning and behavior needs. Its focus is to provide high-quality, scientifically based instruction (instructional methods whose validity has been established by academic research methods) in the general education classroom. The RTI process includes ongoing student assessment and monitoring of individual student progress (progress monitoring) that tracks the results of targeted and tiered interventions. (p. 11)

The direct correlation between data and intensity of interventions is reinforced by Bernhardt and Herbert (2011) who state that, "RTI includes a multi-level prevention system designed to address the learning needs of all students with intervention provided as each student demonstrates a need" (p. 9). Addison and Warger (2011) provide a similar definition proposing that "Response to Intervention, or RTI, is a school improvement system characterized by effective core instruction, a multitier system of supports, data-based problem solving, progress monitoring, and universal screening" (p. 1). Brown-Chidsey and Steege (2011) insist that data must act as the gatekeeper between these tiers of increasing instructional intensity. This ensures that resources are allocated appropriately at each level and that students are provided with multiple opportunities to learn, using various instructional strategies, at each level of the pyramid.

The majority of definitions applied to RTI contain four components. Bernhardt and Hebert (2011) list them as:

- Screening all students using valid, reliable, accurate measures to determine who may be at risk for poor learning outcomes.
- Providing multiple levels of evidence-based instruction and intervention to meet the specific needs of students.
- Progress monitoring within each intervention level to assist in determining the effectiveness of instruction and interventions.
- Analyzing and utilizing data from multiple sources to inform decisions for designing systems of instruction and support. (p. 10)

Indeed, these four areas are highlighted in the following visual representation of the functions of RTI created by The National Center on Response to intervention:



Figure 1. Functions of RTI. This graphic illustrates how each component of the RTI structure works together to create the desired outcome of increased student learning, (*The Essential Components*, n.d., p. 1).

As many authors affirm (Addison et al., 2010; Bender et al., 2011; Bernhardt et al., 2011; Brown-Chidsey et al., 2010; Burns et al., 2012; Burton et al., 2012; Fisher et al., 2010; Glover et al., 2010; Searle, 2010; Shores, 2012; Stoehr et al., 2011) this combination of evidence based instruction, data driven interventions of increasing intensity, close monitoring of student progress and scientifically based instruction creates a safety net that can help promote increased student learning. When implemented systematically, and with fidelity, RTI can ensure that schools are using best practice pedagogy and systems organization in order to maximize student learning.

Assessment

Assessment data drives RTI systems and ensures the effectiveness of the process. Constant analyses of assessment data allows educators to determine, in timely and
effective ways, who is in need of intervention. It also provides evidence of how well instruction and/or interventions are working for individual students. "...these assessments can be used to monitor how well a child is responding to targeted intensive instruction at Tiers 1,2 or 3" (Bender & Waller, 2011, p. 57). Data acts as a gatekeeper between the tiers of the pyramid and indicates when students are no longer in need of interventions. Searle (2010) insists that "just as feedback helps runners shave seconds off their time, educators and students need specific data to stay on target and make appropriate adjustments if the going gets rough"(p. 3). Burton and Kappenberg (2012) state this about data analysis: "The pattern of analyzing the student's learning needs and matching them with a well-constructed intervention brings a level of precision to the work of building teams" (p. 48).

Because teachers, learning support staff and paraprofessionals will become the purveyors of data and make important decisions based on their findings, it is important that they be in charge of developing or selecting assessment tools. Bender and Waller (2011) report that, "Assessments should ... be carefully selected by teachers and schools to target the exact assessment areas needed, rather than as a district – or statewide assessment mandate" (p. 57). The process of selecting what assessments should be used is extremely important. "When we select interventions that have a solid research base, provide the necessary resources to implement the intervention with precision, and collect meaningful data documenting student's progress, we have greatly increased the chances of effecting positive student behavior change" (Brown-Chidsey & Steege, 2010, p. 42). Educational experts suggest that interventions need to be research-based to ensure that the data collected will be accurate and meaningful. Brown-Chidsey and Steege (2010)

clarify that, "an intervention is said to be evidence-based when it has been found to be effective in cases of well-designed and robustly implemented experimental analysis." (p. 39). Burns and Gibbons (2012) agree upon the importance of scientifically proven assessments, arguing that "Using valid and reliable student outcome data is one way to operationalize educational results" (p. 41).

There are two methods of determining the validity of an assessment. The first is for teachers and other RTI team members to become good consumers of published research (Brown-Chidsey & Steege, 2010). In this process, analysis of published research on assessment tools should take place to determine if assessments suitably target perceived needs. Significant professional development and capacity building may be necessary to implement school-based research analysis.

The second method of ensuring optimal selection of assessment is for teachers to become researchers themselves, using the scientific method to establish validity, reliability and effectiveness. Brown-Chidsey and Steege (2010) report that professional development in this scenario would look very similar to action research and would be preceded by training in educational psychology and research methods. These authors describe single-subject experimental design as, "Establishing a baseline measure (dependent variable) of student behavior or academic performance. Introducing an intervention (independent variable). Documenting the effects of the intervention through repeated measure." Brown-Chidsey and Steege (2010) insist that by 'test driving' an intervention teachers are able to determine its potential to help students in need. Another key to maximizing the effectiveness of RTI is to put in place mandates that will ensure that all educators are implementing and administering assessment tools consistently throughout the school in the manner in which they were designed to be carried out (Addison et al., 2010; Bender et al., 2011; Bernhardt et al., 2011; Brown-Chidsey et al., 2010; Burns et al., 2012; Burton et al., 2012; Fisher et al., 2010; Glover et al., 2010; Searle, 2010; Shores, 2012; Stoehr et al., 2011). The structure of RTI necessitates that teachers and administrators use a consistent set of protocol for ensuring student success. Fidelity and consistency are necessary elements of effective benchmark assessment. It is important to maintain progress monitoring tool consistency as different tools measure different things even if they purport to measure the same thing (Bender & Waller, 2011). When implemented without fidelity or consistency, both progress monitoring assessments and interventions effectiveness are compromised (Brown-Chidsey & Steege, 2010).

The types of assessment and subsequent data collection that occur in RTI systems can be separated into two distinct categories. The first is universal screening, which takes place three times during the school year with the purpose of identifying students whose needs are not being met by core instruction. According to the National Center on Response to Intervention, universal screening consists of "brief assessments that are valid, reliable and evidence based" (as cited in Burton & Kappenberg, 2012, p. 92). School-wide screening can also highlight problems with core instruction (Addison et al., 2010; Bender et al., 2011; Bernhardt et al., 2011; Brown-Chidsey et al., 2010; Burns et al., 2012; Burton et al., 2012; Fisher et al., 2010; Glover et al., 2010; Searle, 2010; Shores, 2012). The second type of assessment is referred to as progress monitoring. This type of frequent and easily administered assessment is conducted on behalf of students who are receiving interventions. Progress monitoring allows team members to determine if students are demonstrating the desired growth or if things need to be changed through continuous feedback.

Universal Screening

Universal screening is a collection of assessment tools that can be administered relatively quickly, are low-cost, and provide reliable indication of student grade-level benchmark skills. Bender and Waller (2011) note that "... in the 21st century, universal screening and benchmarking assessments are considered critical for effective instruction, as well as for implementing of RTI procedures." (p. 43). Universal Screening separates RTI from the so called wait-to-fail model. Instead of waiting for students to receive coding and placement in special education programs following the demonstration of significant gaps in performance before providing intervention, universal screening takes place near the beginning of the school year, between mid-September and the beginning of October (Addison et al., 2010; Bender et al., 2011; Bernhardt et al., 2011; Brown-Chidsey et al., 2010; Burns et al., 2012; Burton et al., 2012; Fisher et al., 2010; Glover et al., 2010; Searle, 2010; Shores, 2012; Stoehr et al., 2011). All students complete a predetermined set of assessments. Individual student results are compared to benchmark standards of what student ability levels are expected to be like at that point in the school year. These benchmark standard are established by provincial curricular outcomes and can be further defined by staff members at individual schools. "Examining the entire grade level of students allows teachers to determine how to use valuable yet scarce

resources most effectively" (Burns & Gibbons, 2012, p. 26). "A key element in setting the baseline is that it be measured in exactly the same format as will be followed throughout the progress monitoring" (Burton & Kappenberg, 2012, p. 29). Burns and Gibbons (2012) assert that "Without screening and progress monitoring data, schools will not accurately identify students at risk for academic failure, and more important, they will not be able to determine if the interventions provided to students are effective" (p. 41).

Screening assessments are often provided consistently throughout a building, or district wide, to allow for comparison of common benchmark indicators. Data from the screening process will inform building teams of which students may be at risk so that more information can be gathered on these students" (Burns & Gibbons, 2012, p. 18). Hall (2012) states "When a school has universal screening of all students at the three benchmark periods per year, teachers can be assured that a student will not go more than 4 months between screenings" (p. 72). Data must be made meaningful and used during meetings to set goals and guide instruction. Looking at big picture data is not productive unless benchmarks are set.

When student results fall short of the benchmark standard then a need for intervention is substantiated. In order to do this Brown-Chidsey and Steege (2010) recommend that all marks be converted to percentages for easy comparison. Consensus among researchers exists that it is important to carefully isolate 'cut points' or baselines that will serve to determine expected student aptitude. Wide net screening is designed to isolate students who may have deficits by comparing actual student performance against these perceived expectations. Several researchers suggest that this proactive search for students in need of remediation take place three times during each school year (Addison et al., 2010; Bender et al., 2011; Bernhardt et al., 2011; Brown-Chidsey et al., 2010; Burns et al., 2012; Burton et al., 2012; Fisher et al., 2010; Glover et al., 2010; Searle, 2010; Shores, 2012). Brown-Chidsey and Steege (2010), as well as Bender and Waller (2011) suggest the following dates: Fall (September 15 –October 15th), winter (January 1st-31st) and spring (May 1st to 31st). Burns and Gibbons (2012) recommend defining the following windows of time in which screening will take place: the last 2 weeks of September, the last two weeks of January and, finally, the last two weeks of May.

Universal screening data not only contributes to isolating students in need of intervention, it also helps pinpoint high-priority areas of concern (Addison et al., 2010; Bender et al., 2011; Bernhardt et al., 2011; Brown-Chidsey et al., 2010; Burns et al., 2012; Burton et al., 2012; Fisher et al., 2010; Glover et al., 2010; Searle, 2010; Shores, 2012). Screening provides data that helps schools answer fundamental questions: Are there issues with core programming? Is there a particular subject area that needs to be bolstered? Are there inconsistencies between grade levels? What should we keep and what needs to be dropped or updated? Burns and Gibbons (2012) insist that benchmark test results can be used to determine school norms, set goals and determine the effectiveness of core instruction.

Professional development and capacity building around benchmark assessments and progress monitoring is a fundamental component of any RTI system. Teachers must not face this daunting task alone. Special education teachers, school psychologists, high

school work experience students and community volunteers may all be utilized to help teachers with benchmarks screening. "In some cases, classroom teachers conduct benchmark assessments of the students in their classrooms, but our experience has shown that it is usually best to have a team conduct benchmark assessments to help assist with teacher 'buy-in' of the process" (Burns & Gibbons, 2012, p. 25). Many authors suggest that a database or data repository must be purchased or developed to store the data after each screening period. A tremendous amount of data will result following the completion of each screening window. Ease of storage and access of this data must be considered. According to Brown-Chidsey and Steege (2010) the four key features of effective data collection are 1. defining the target skill or behavior 2. specifying the setting where the data will be collected 3. using an accurate data recording format and 4. conducting careful data analysis and interpretation. Although there are several logistical concerns that must be attended to and resources that must be mobilized in order to screen an entire school the results are undeniable. Burns and Gibbons (2012) suggest that "Once regular data are collected and examined by teachers, there is a natural inclination to want to find more effective ways to raise achievement for all students." (p. 32). In order to help with this process, Burns and Gibbons have created a table of screening and progress monitoring tools in their 2012 publication. Brown-Chidsey and Steege (2010) have also created what they refer to as a Benchmark Planning Work Sheet. Addison and Warger (2010) provide as similar planning tool.

Progress Monitoring

Progress Monitoring (PM) is the use of frequent assessment data that tracks student progress towards benchmark standards. Hall (2012) states "Progress monitoring

sometimes is the forgotten cousin of benchmark screening. Yet it is the most important part of the RTI process" (p. 63). Burton and Kappenberg (2012) stress the intrinsic quality of PM, noting that "progress monitoring is a method of gathering evidence that informs the RTI process." PM is designed to provide quick insight into student performance at frequent and intermittent intervals rather than in depth data resulting from extensive testing. By tracking student advancement towards the benchmark using frequent assessment, progress monitoring serves to monitor ongoing learning rates and ensures that all stakeholders are kept up to date (Addison et al., 2010; Bender et al., 2011; Bernhardt et al., 2011; Brown-Chidsey et al., 2010; Burns et al., 2012; Burton et al., 2012; Fisher et al., 2010; Glover et al., 2010; Searle, 2010; Shores, 2012). The resulting data is used to determine the effectiveness of interventions on individual students, and make necessary adjustments. According to Brown-Chidsey and Steege (2010) frequent feedback on student performance increases student performance. Progress monitoring allows for faster response when interventions are not working, and provides direction for necessary tailoring of instructional strategies.

Many researchers make specific recommendations regarding preferred progress monitoring tools. Bender and Waller (2011) recommend specific progress monitoring tools including: Reading A-Z running records, mClass software, and DIBELS. They suggest "DIBELS is, perhaps, the most commonly used assessment for progress monitoring of early reading skills" (p. 54). Hall insists that graphing progress is one of the most important uses of data. She calls for the use of the goal-line to illustrate the desired level of growth or progress in a given area of determined need (Hall, 2012). Bender and Waller (2011) suggest Reading A-Z Running Records, e-Assessment: mClass Software Running Records, DIBELS, and Words Their Way. It is extremely important for schools to select good PM tools as they will be administered to between 20-25 percent of the student population on a frequent (monthly to weekly) basis. The progress monitoring tool selection process should be conducted collaboratively with school staff members. During PM tool selection meetings stakeholders should review the qualities of instruments whose validity is established by academic research. Stakeholders also need to consider availability, familiarity and their ability to implement PM tools with fidelity.

Implementation of such an all-encompassing endeavor requires mobilization of the entire resource pool a school has to call upon. The logistics of progress monitoring need to be highly structured and well laid out. Gresham (1989) found that "Many failures of education reforms and practices can be attributed to poor implementation" (as cited in Mellard & Johnson, p. 153). In order to lighten the burden placed upon already busy teachers, Burns and Gibbons (2012) insist that paraprofessionals can be used to collect progress monitoring data. In order to accomplish this "Coordination among general education and special education support services is essential" (Searle, 2010, p. 11). Burton and Kappenberg (2012) stress that it is also imperative that progress monitoring tools be simple to administer and chart. They point out that simplicity is essential in creating fidelity of instruction. Furthermore, "This is extremely important for data collection and management, since variations in the way instruction is implemented make it difficult to determine whether student performance is the result of student's individual response to the instruction, or of the instruction itself" (Burton & Kappenberg, 2012, p. 25).

The amount of data that results from PM can be difficult to manage and analyze. In order to make this process as efficient and effective as possible, several researchers suggest creating very deliberately designed graphs that visually display student progress towards an aim line that represents the grade level benchmark. Burton and Kappenberg (2012) emphasize that the selection of accurate benchmarks standards is paramount in PM and graphing; therefore, the use of multiple measures rather that the result of a single instance should be provided. Each benchmark measure selected needs to be graphed separately on what is referred to as a curriculum based measure (CBM) graph. "The key to CBM is graphing a large number of results of student performance measures that, in aggregate, reveal the academic progress of individual students" (as cited in Burton & Kappenberg, 2012, p. 22). Typical PM or CBM graphs display date ranges along the x axis and PM scores along the Y axis. This format creates a visual timeline of student growth towards the benchmark. Several authors have included examples of PM graphs; these examples can be found in Burns and Gibbons (2012), and Searle (2010). Perhaps the best illustration and explanation of PM graphing can be found in Burton and Kappenberg (2012). Graphing in this manner allows stakeholders to quickly and accurately predict student progress success. And, as Hall (2012) advises, "Comparing the actual with expected performance is critical for determining whether the rate of progress is sufficient" (p. 66). If student progress is not moving towards the aim line, then adjustments to the intervention program must be made. Burns and Gibbons (2012) suggest that calculating the numeric slope may be of value in determining whether or not or to what degree a particular intervention is working. Commercially prepared CBM graphing systems such as Aims web are available. Additional information about this

resource can be found at their following web site:

(http://www.pearsonassess.ca/haiweb/cultures/en-ca/misc/aimsweb.htm).

Several authors suggest that CBM graphs need to be available at gradelevel/learning support meetings in order to help determine how interventions are working, and to help analyze progress of students who are not currently meeting benchmarks (Addison et al., 2010; Bender et al., 2011; Bernhardt et al., 2011; Brown-Chidsey et al., 2010; Burns et al., 2012; Burton et al., 2012; Fisher et al., 2010; Glover et al., 2010; Searle, 2010; Shores, 2012; Stoehr et al., 2011). Data helps focus grade-level meetings on curriculum and instruction and away from peripheral concerns. Shore (2012) states "These data meetings with teachers should be focused entirely on the students and what the school community can do to create a plan to help each student reach benchmarks" (p. 76). Hall (2012) insists that these data analysis meetings should take place at least every three months and should include teachers, administrators, RTI team coordinators and parents.

There is a high level of consensus among researchers regarding the frequency with which PM data should be collected. Burns and Gibbons (2012) distinguish between strategic monitoring which requires the collection of data monthly or biweekly in Tier 2 and intensive monitoring which occurs in Tier 3 at intervals of no less than every week, but preferably twice a week. "Students involved in problem solving are most often monitored weekly towards their goals. This rate of data collection allows a sufficient number of data points to be collected in a timely manner for decision making" (Burns & Gibbons, 2012, p. 122). Although researchers agree upon the frequency of PM, there is very little consensus about the duration of interventions before data can be analyzed and used to make decisions. Interventions should be used for at least three weeks to three months depending upon the frequency that student performance data is being collected. Brown-Chidsey and Steege (2010) prefer three data points is the minimum number need to establish trend data, while Burton and Kappenberg (2012) and Hall (2012) suggest that at least six data points are needed to establish a reliable slope. Burns and Gibbons (2012) argue that as many as eight to twelve data points are needed to establish a slope valid enough to create a solid base from which decisions can be made. When educators are making the decision to move a student from Tier 2 to Tier 3 interventions, the minimum number of data points may not be relevant. According to Hall (2012), the University of Texas Center for Reading and Language Arts has concluded that a student needs to remain in Tier 2 for 10 to 12 weeks before decisions regarding placement in Tier 3 can be made.

When an intervention is not producing the needed progress for students to meet benchmark goals it is necessary to adjust instruction. Brown-Chidsey and Steege (2010) report that after 6 weeks with undesired levels of improvement the maximum time allotment has been breached and the intervention should be deemed invalid or ineffective. Burns and Gibbons (2012) argue that as little as three points below the desired aim line is enough to substantiate that an intervention is not working. Searle (2010) states that "according to the Four-Point Rule, if the four most recent consecutive data points are below the goal line, a change in intervention should be considered" (p. 71)

In order to be as reactive as possible to student response to specific interventions, researchers suggest several ways to augment interventions in order to elicit desired results. Hall (2012) suggests that in response to inadequate rates of progress the following recommendations should be taken into consideration: increase time, reduce group size, increase the frequency of error corrections, or break tasks down. When responding to extreme variability of student PM, Hall (2012) has found that increasing PM frequency can reduce variability. Burns and Kappenberg (2012) have found that something as nonintrusive as a change of setting can alter student performance. Brown-Chidsey and Steege (2010) report that rather than abandoning interventions, desired results can often be achieved through the increase in the intensity, duration and/or frequency of instruction. They also agree that a change in setting, time of day and group membership can impact student performance positively. However, if a teacher or member of the learning support team deems an intervention ineffective, then the intervention itself must be changed. "Any changes in the intervention need to be noted on the graph with a vertical line. Even slight changes such as the length of sessions must be recorded so that the methodological differences between the interventions can be easily monitored" (Brown-Chidsey & Steege, 2010, p. 101). Progress Monitoring also works to notify team members when students have successfully achieved a level of progress that indicates that they no longer need intervention. The process of identifying when students are ready to return to Tier 1 (core instruction) and discontinuing interventions must be predetermined and structured with deliberate care. Many researchers suggest a clearly defined set of criteria for determining a so-called 'exit strategy'. If a student exhibits three data points that meet or exceed the benchmarks for that particular grade and time of year then the learning

support team should reduce or discontinue the intervention. "The Heartland Group in Iowa recommends four data points above benchmark, and we typically advise three consecutive data points at or above benchmark" (Hall, 2012, p. 69). However, it may be useful to monitor student progress for a period of one month to ensure that they do not regress after being exited from Tier 2 intervention groups (Hall, 2012).

Interventions

The success of any RTI system can be influenced by the specific interventions that are offered at each level of the multi-tiered structure, and how they are carried out. One resounding quality that all researchers prescribe for successful intervention is that it be scientifically based meaning that their effectiveness is demonstrated by academic research and proven by case studies. Carefully selected and specifically targeted interventions will yield maximum results from the expense of precious resources. Brown-Chidsey and Steege (2010) found that "using interventions that have a proven track record increases the probability of positive outcomes for students" (p. 42). It is crucial to spend time examining research-based academic interventions before selections are made (Bender et al., 2011; Brown-Chidsey et al., 2010; Burns et al., 2012; Burton et al., 2012; Fisher et al., 2010; Glover et al., 2010; Searle, 2010; Shores, 2012). Addison and Warger (2011) provide a template for examining the quality of research-based academic interventions at Tier 2 and Tier 3. Burns and Gibbons (2012) provide a list of websites designed to help select evidence-based interventions (EBI).

Sufficient research must also be applied to aligning interventions with student needs. Specifically targeted interventions are key. Burns and Gibbons (2012) have

constructed a table listing interventions and their intended outcomes. Bender and Waller (2011) have included detailed descriptions of several software based intervention programs including: Kidspiration, SuccessMaker, The Academy of READING, Fast ForWord, Read Naturally, Accelerated Reader and Study Island. Brown-Chidsey and Steege (2010) offer a criteria list used to determine the efficacy of interventions. Fisher and Frey (2010) have created a rubric for analyzing interventions.

Ensuring that interventions are selected using in-depth research and the scientific method is not enough. It is also imperative that interventions be implemented using treatment integrity (Addison and Warger, 2010; Bender and Larkin, 2012; Burns and Gibbons, 2012). This means that those responsible for carrying out the interventions do so with strict adherence to the method by which those interventions were designed to be administered. This will ensure that the intervention will yield maximum results. Fidelity will also create consistency which is the key to producing reliable, reproducible data. Burns and Gibbons (2012) point out that Tier 1 and Tier 2 interventions can be carried out by, "... a fully licensed teacher, an educational assistant/paraprofessional, peer tutors, or volunteer tutors" (p. 100). They have even suggested utilizing older students if appropriate. Because of the variability in who may possibly be administering interventions, it is important to ensure that sufficient professional development and capacity building efforts are provided. Mellard and Johnson (2012) describe how mentor teachers and school coaches can increase fidelity of implementation by monitoring progress of teachers in delivering instruction in the content area; providing professional development, coaching, and training; evaluating results of observations; collecting work

samples to provide meaningful and specific feedback to teachers; and responding to teacher requests for assistance or information.

Other considerations to ensure the maximum efficiency and effectiveness of interventions systems, as part of RTI, include the logistics of when and where interventions are carried out. For example, it is imperative that intervention times be scheduled outside of literacy blocks (Bender & Waller, 2011). This will ensure that students do not receive enrichment only to miss out on important literacy instruction or reading practice. By receiving enrichment in addition to core literacy instruction students benefit from what Searle (2010) refers to as a 'double dose'. Burn and Gibbons (2012) suggest three possible models for scheduling interventions. The first is conducted within the classroom as push-in support during regular core instruction. A second system is referred to as school-wide RTI time, or '*power hour*'. During the power hour all targeted students receive interventions at the same time while students who are not in interventions work independently. The third method referred to as 'floating RTI' involves the use of specialists who conduct interventions continuously throughout the regular school day. Bender and Waller (2011) describe how the use of computer-based software programs can provide general education teachers with an avenue to intervention that does not require great amounts of time to administer or track.

Multi-tiered structure of increasing intensity

"To accommodate students with varying learning levels of need, services for RTI are provided within a multi-tier framework" (Glover, 2010, p. 9). Awareness of student learning diversity has been growing in part, as a result of the Inclusive Education

movement. The movement towards teacher accountability has led to a greater realization that students learn at various different rates and in many different ways. Teachers need to make accommodations to account for these differences. The multi-tiered structure that exists as part of the RTI framework serves to address these realities and provides an organizational structure for meeting students' needs based on their response to instruction and intervention. The three-tiered structure outlined by the RTI model is commonly referred to as the Pyramid of Interventions (Addison et al., 2010; Bender et al., 2011; Bernhardt et al., 2011; Brown-Chidsey et al., 2010; Burns et al., 2012; Burton et al., 2012; Fisher et al., 2010; Glover et al., 2010; Searle, 2010; Shores, 2012). The pyramidal shape serves as a graphic organizer in which students are placed into the different tiers based on their need for different intensity of instruction.

Researchers agree about the common structure of the pyramid (Addison et al., 2010; Bender et al., 2011; Bernhardt et al., 2011; Brown-Chidsey et al., 2010; Burns et al., 2012; Burton et al., 2012; Fisher et al., 2010; Glover et al., 2010; Searle, 2010; Shores, 2012). The base of the pyramid – Tier 1 houses all of the students whose needs are met by core class instruction. The second tier of the pyramid is reserved for students who are identified as being in need of intervention. Students in Tier 2 receive targeted, small-group interventions and progress monitoring at least monthly. The tip of the pyramid, Tier 3, houses those students that have demonstrated a need for intensive individualized interventions. There is some discrepancy among researchers regarding what portion of the student population's needs will be met through core instruction alone, as well as what percentage of the student population should receive Tier 2 and Tier 3 interventions. The chart below illustrates the range of percentages per tier as

recommended by certain researchers. These guidelines are important, so that school administrators can compare the composition of their student populations per tier percentages with the recommendations outlined by RTI experts. If a schools demographic does not fit within these guidelines, it is a good indication that core instruction needs to be improved.

| Fisher and Frey | | | Burns and Gibbons | | | Bender and Waller (2011) | |
|-----------------|----------|--|--------------------|-------------|--|--------------------------|----------|
| (2010) | | | (2012) | | | Tier | % of pop |
| Tier | % of pop | | Tier | % of pop | | 3 | 5 |
| 3 | 5-10 | | 3 | 5 | | 2 | 15 |
| 2 | 10-15 | | 2 | 20 | | 1 | 80 |
| 1 | 75-85 | | 1 | 80 | | | 11 |
| Bernhardt and | | | Collier (2012) | | | Stoehr, Banks and Allen | |
| Hebert (2011) | | | Tier | % of pop | | (2011) | |
| Tier | % of pop | | 3 | 5 | | Tier | % of pop |
| 3 | 5 | | 2 | 15 | | 3 | 5-10 |
| 2 | 15 | | 1 | 80 | | 2 | 10-15 |
| 1 | 80 | | | L | | 1 | 80-85% |
| Searle (2010) | | | Addison and Warger | | | Burton and Kappenberg | |
| Tier | % of pop | | (2011) | | | (2012) | |
| 3 | 1-5 | | Tier | % of pop | | Tier | % of pop |
| 2 | 5-10 | | 3 | Unspecified | | 3 | 3-5 |
| 1 | 80-90 | | 2 | 10-15 | | 2 | 5-10 |
| | ıl | | 1 | 80-90% | | 1 | 100 |

Table 2. Allocation to Tier Level by Percent of Student Population. This table compares how different researchers suggest school's populations should be composed within the multi-tiered RTI structure. (Addison et al., 2010; Bender et al., 2011; Bernhardt et al.,

2011; Brown-Chidsey et al., 2010; Burns et al., 2012; Burton et al., 2012; Fisher et al., 2010; Glover et al., 2010; Searle, 2010; Shores, 2012; Stoehr et al., 2011)

The range for Tier 1 spans from 75 percent at the low end to as high as 90 percent. Tier 2 hosts from five percent to 20 percent; while Tier 3 spans from one to five percent of the student population (Addison et al., 2010; Bender et al., 2011; Brown-Chidsey et al., 2010; Burns et al., 2012; Burton et al., 2012; Fisher et al., 2010; Searle, 2010; Shores, 2012; Stoehr et al., 2011). Although there is no mention of a reason for this discrepancy among the literature studied, some obvious reasons can contribute to the differences. They include school demographics, the quality of core instruction being provided and the accuracy of the benchmark screening tools.

The most common model supports 80% of students at Tier 1, 15% at Tier 2 and 5% in Tier 3 respectively. The majority of the literature on the subject specifies that 80-85% of the student population should achieve benchmark standards with core instruction, leaving 15-20% in need of focused interventions (Bender et al., 2011; Bernhardt et al., 2011; Burns et al., 2012; Shores, 2012; Stoehr et al., 2011). Johnson, Smith, and Harris (2012) found that "If significantly more than twenty percent of students are identified as in need of intervention a school's first priority should be improving the Tier 1 program" (p. 89). Burns and Gibbons (2012) found that in some cases "... it could be possible that none or very few of the students would meet that criterion. In this situation, the school could target the lowest 20% on the bench mark score in each grade" (p. 47). Bender and Waller (2011) point out that it is important to retain some flexibility as to who will receive an intervention even if there is a percentile cut-off. Johnson, Smith, and Harris (2012) confirm that referral to Tier 2 and Tier 3 should not be made upon teacher request

without substantial supporting evidence. In this way Bender and Larkin (2012) insist that the two tiers in the three-tier model act as a safeguard against premature diagnosis of learning disabilities. "These multiple intervention tiers are required to ensure that the child had several adequate opportunities to respond to instruction" (Bender & Larkin, 2012, p. 116).

The pyramid serves not only as way of visually organizing students into categories based on the intensiveness of the intervention that they are receiving; it also acts as a menu for the interventions at each tier. By creating a library of interventions and attaching it to the pyramid, team members have an efficient way of accessing available instructional tools (Addison & Warger, 2011). Searle (2010) confirms that "teachers need access to a menu of research-based possibilities, ranging from whole-class strategies to more intense individual interventions that require special training to implement" (p. 3). Too often, educators working with students do not know where to find the available resources or strategies needed to guide student learning. When a repository of interventions and instructional tools is created in one place, and all parties can access it, this problem is alleviated. Addison and Warger (2011) insist that, "Because staff members do not always know what supports and services are available, the tiered model provides a means for showcasing them. The tiered structure also enables staff members to note where there are gaps in service" (p. 117).

Indeed, the tiered pyramid structure is far more than just a graphic or visual; it is an extremely powerful tool that helps organize the entire student body, instructional methods and all available interventions in one easily accessible place. The pyramid of interventions, when utilized to the fullest of its potential, becomes the scaffolding for the entire RTI process. Bender and Waller (2011) attest to the potency of the multi-tiered system and the pyramid of intervention. "The available research suggests that multiple tiers of interventions in an RTI process seem to alleviate reading problems for those 75 to 90% of students who initially struggle in reading" (p. 9).

Below are several representations of the pyramid of interventions as described in RTI literature:



Figure 2. Three Tier Pyramid of Interventions According to Margret Searle. This graphic outlines the demographic breakdown of recommended percentages of a school's student population in each tier of the tiered structure. The graphic also provides a very brief description of services provided at each tier of the pyramid structure. (Searle, 2010, p. 4)



Figure 3. Three Tier Pyramid of Interventions According to Severson et al. The figure above provides and overview of student population distribution among the three tiered pyramid system, offers a brief description of what students are served by each tier and the focused interventions offered by the three tiers. (Severson, Walker, Hope-Doolittle, Kratochwill & Gresham, 2007, p. 215).



Figure 4. Three Tier Pyramid of Interventions According to Bernhardt and Hebert. Figure 5 graphically depicts the organization of the student population among the tiers by percent and provides and overview of services offered at each tier of the pyramid structure. (Bernhardt & Hebert, 2011, p. 11).

Organizing services into three levels of support and assigning students to each tier using assessment data, as outlined in the examples above, helps to ensure that all students receive the level of support needed to ensure success.

Tier 1. Tier 1 forms the base of the pyramid of interventions and is the core instructional programing that all students in a school receive in the general education classrooms. "Ensuring that core instruction is effective for all students is an essential RTI component" (Addison & Warger, 2010, p. 71). According to the National Council for Teacher Quality, performance on the National Assessment of Education Progress indicated that 38% of all fourth graders read below a basic level. That is about the same level of reading performance that had been reported for the previous 25 years, despite the fact that, during that same time, we have dramatically increased our knowledge of how people learn to read (Burton & Kappenberg, 2012). However, research has shown that strong core programming should meet the learning needs of between 75-90% of students (Addison et al., 2010; Bender et al., 2011; Bernhardt et al., 2011; Brown-Chidsey et al., 2010; Burns et al., 2012; Burton et al., 2012; Fisher et al., 2010; Glover et al., 2010; Searle, 2010; Shores, 2012; Stoehr et al., 2011). In order to ensure that this proportion is reached, it is imperative to analyze the effectiveness of the general education program during the initial phases of implementation of RTI. Without a solid foundation, the other

components of RTI will not yield desired results. Best practice core curricular programming should utilize current educational theory, while taking into account the different brain function of 21st century learners, and gender differences that exist between girls and boys (Bender & Waller, 2011). Because Tier 1 is the foundation to a strong RTI program, data needs to be analyzed in order to determine if core programming is solid.

The universal screening component of RTI provides the necessary data for accurate and timely analysis of core instructional materials and methods. Simple standards of comparison can be used to establish if problems in general education programing exist. According to Addison and Warger (2010) "From an RTI perspective, schools with fewer than 75 percent of students at or above grade level proficiency have a core program problem" (p. 71). In order to determine if problems exist in Tier 1, (or core instruction), the class median score should be compared to benchmark indicators. If the median falls below the benchmark then a Tier 1 problem exists that must be addressed at the classroom level (Burns & Gibbons).

If data analysis isolates core instructional performance gaps there are several avenues of remediation that need to be explored. Gibbons and Burns (2012) suggest using two commercially prepared measures to isolate specific deficits and corresponding solution options. Both the *Ecobehavioral Assessment System Software* and the *Functional Assessment of Academic Behavior* allow for examination of and consultation about instructional practices in a non-threatening, problem-solving way although little research is available to substantiate their effectiveness. Targeted professional development and peer coaching can play a significant role in ensuring that instructional programming is

implemented correctly. Ensuring that implementation of programs and processes is done in the prescribed and most effective manner is referred to as treatment fidelity. Treatment fidelity has been shown to have significant influence on the success of achieving desired outcomes (Brown-Chidsey & Steege, 2010).

Even if data does not reveal problems with core programming, Addison and Warger (2011) suggest that schools should review core instructional programming purposefully. Brown-Chidsey and Steege (2010) emphasize that the first step in any RTI implementation process is to ensure the use of evidence-based general education instructional methods. The importance of delivering a quality core instructional program cannot be overlooked. Research and best practice pedagogy has shown that high-quality instructional materials can have a major impact on student learning. Programs and instructional materials must be validated or verified by scientific research. Teachers, administrators and educational stakeholders need to foster the ability to identify evidence-based programing among the vast array of available educational products. Brown-Chidsey and Steege (2010) suggest three possible methods for selecting evidence based programming instructional materials: professional development; field research; and expert consultation.

Tier 2. Research has shown that although Tier 1 is based on best practice strategies, some students will not respond to it. In fact, 20-25 % of students have some difficulty reading in early school years (Bender & Waller, 2011). In order to meet the needs of the students who do not respond to Tier 1 instruction, Tier 2 provides a more personalized, intense level of support and instruction specifically designed to meet the

diverse learning needs of individual students. "Tier 2 interventions involve supplemental, targeted interventions for small groups – perhaps 20 percent of the class – that are struggling in reading in the general education class" (Bender & Waller, 2011, p. 8). Research regarding the logistics of carrying out Tier 2 programming suggests a very structured format specific to location, group size, frequency and personnel.

Unlike Tier 1 interventions, Tier 2 interventions are, more often than not, conducted outside of the classroom. Class size and composition plus space availability make it necessary, in many cases, to conduct Tier 2 interventions in alternate locations (Brown-Chidsey & Steege, 2010). This also minimizes distractions and allows small groups to focus on specific skills unimpeded by the complexities of the larger classroom environment. Burton and Kappengerg (2012) insist that cross-grading is appropriate as long as students demonstrate relatively similar aptitudes and instructional needs.

Research also suggests that care must be taken when organizing students into intervention groups. Collecting students, by need, into homogenous groupings is necessary so interventionists can accurately target students' needs using specifically aligned interventions (Fisher & Frey, 2010). While Tier 1 interventions are applied in class during core instruction, Tier 2 interventions should be done in small groups. Research has shown that small group instruction is as effective as one on one (Burns & Gibbons, 2012). There is some discrepancy among researchers about the size of Tier 2 interventions groups. While several authors insist that group size should range from three to six students (Searle, 2010; Shores, 2012), Fisher and Frey (2010) specify two to five members is ideal, and Burns and Gibbon (2012) and Burton and Kappenberg (2012) agree that groupings should range from four to six students. Recommendations about frequency rates of interventions differ slightly among authors. Burns and Gibbons (2012) suggest that Tier 2 interventions be performed from two to five times a week. Fisher and Frey (2010) and Searle (2010) suggest that supplemental interventions be administered at least three times per week. A considerable group of researchers call for weekly interventions at this level (Brown-Chidsey & Steege, 2010). Although there is inconsistency regarding frequency of intervention there seems to be consensus that interventions be conducted in 30 minute intervals of instruction for these pullout groups (Burns & Gibbons).

Classroom teachers are the ideal candidates for implementing and tracking Tier 2 interventions, however, due to the complex needs of students and the complexity of classroom behavior management, some RTI applications have included use of educational assistants and other educational paraprofessionals at the tier 2 level. Burns and Gibbons (2012) have even suggested the use of older students to conduct interventions. In certain cases, where needs are significant, specialists can often be involved in planning and administering interventions (Addison & Warger, 2011). Regardless of who is selected to provide interventions, all involved parties need access to training and support specific to RTI methodology to ensure consistency and treatment fidelity. If the maximum results of RTI efforts are to be produced, administration, teachers and paraprofessionals must be in constant collaboration to provided fluidity of programming and "coordination among general education and special education support services is essential" (Searle, 2010 p. 11).

Tier 3. The tip of the pyramid, approximately 5%, is reserved for students whose learning needs are not met by Tier 1 or Tier 2 instructional programming (Burns &

Gibbons, 2012). "Children who fail to make progress at Tier 2 in the small group, with additional time, increased frequency, and additional targeted instruction, will be placed in Tier 3 for individualized instruction" (Burton & Kappenberg, 2012, p. 93). For these students, sometimes referred to as non-responders, Tier 3 interventions are imperative to success. This last level of programing offers very intensive, focused, small group or one to one interventions (Bender & Waller, 2011). Tier 3 houses the most intensive and individualized services that a school is able to provide (Addison & Warger, 2011).

Unlike Tier 2, which allows a variety of persons to administer interventions, Tier 3 interventions are typically carried out by reading specialists or special education teachers (Burton & Kappenberg, 2012). Group size is also reduced by permitting a maximum of three students to receive intervention at a time (Searle, 2010). For those students with the most intense needs, Burton and Kappenberg (2012) suggest clinical intervention and support with one-on-one intensive monitoring.

Tier 3 is the last line of defense against student failure to achieve benchmark standards. All resources and expertise that the school can assemble need to be utilized at this level to ensure that everything possible has been done for every student. In this new age of accountability the entire organization is responsible for mobilizing whatever measures are necessary to reach all students regardless of individual differences; this is the essence of RTI.

A multi-tiered structure of increasingly intense instructional services is an ideal organizational structure to have in schools, but designing and implementing an effective pyramid of interventions can be a daunting task for school leadership teams. When implementing large-scale school improvement initiatives, school administrative teams can evoke the use of key leadership strategies to ease the implementation process and ensure success.

Leadership

Organizational leadership is a burgeoning, exciting field. The literature review for this project surveyed some of the most popular and influential publications recently produced in this field. It was my intention to isolates key strategies – suggested by leadership experts – to facilitate broad, long lasting change aimed at organizational improvement. The hope was that, by consolidating these strategies into a concise manual, school leadership teams will be able to use the manual as a reference when implementing RTI or initiating other school improvement initiatives that require organizational change. The leadership section of the literature review was organized thematically based on key strategies that can be used to help foster school improvement. Each strategy was presented in the specific order that the strategies would be applied during the change process. The key strategies discussed in the literature review for this project are laying the foundation for change by starting with why, creating and sharing a vision, influence conditions to foster change, modeling, creating and maintaining motivation and creating continuity. When applied in order and with fidelity, these leadership strategies can greatly increases the effectiveness of change efforts by reducing implementation and staff resistance to change.

Perhaps the most important step in the change process is ensuring that the conditions conducive to change exist before the change process even begins. The most

important of these conditions is that there is a sense of shared responsibility and buy-in associated with the RTI implementation process. The Edmonton Public Learning Consortium describe the context that most effetely invites change, "an environment where education stakeholders share the responsibility for addressing essential conditions within a culture of learning that fosters inquiry, risk-taking, sharing and collaboration" (Essential Conditions, 2012).

Many school improvement initiatives begin with school administrators sharing their vision of the changes they would like to see. Although this is an extremely important step in the change process, research suggests that this maybe cause the initiative to fail before it even begins (Sinek, 2011). It is imperative that leaders start by communicating why change is necessary before taking any other steps. Anthropologist, ethnographer and leadership expert – Simon Sinek – insists that is the most important leadership strategy for ensuring that you motivate all necessary stakeholders to help make improvement initiatives a reality (2011). "People don't buy what you do; they buy why you do it" (Sinek, 2011, p. 37). It is only by eliciting the support of school staff and community that leaders can realize the transformational changes necessary to make the transition to an RTI model a reality.

In comparison to other school improvement initiatives, RTI is a relatively broad and extensive undertaking that requires significant time, resources and the full support of all staff members. In order to align staff motivation with RTI implementation, it is imperative for change leaders to create an understanding among their staff about why RTI is so important. Staff members must understand what RTI is and how it helps student succeed. Once all stakeholders know why an RTI model needs to be implemented, school leaders can work to carefully craft and communicate a shared vision of change that will guide the implementation process. Kouzes and Posner (2012) list "Inspiring a shared vision" as one of the five most important strategies to effectively leading change in their publication *The Leadership Challenge*. In order to align stakeholders with one's cause, they must be able to conceptualize what the outcome will be, their own roles within the program and the work they need to do to fulfill their role throughout the change process. A strong, clearly articulated vision that puts student learning at the center of initiative will promote buy-in and align the efforts of all involved in a common direction.

Implementing RTI with fidelity will require the entire staff, a great deal of school resources and typically two to three school years' worth of effort and determination. As an administrator, you will need to ensure that you have the support of your staff and creating a shared vision is central to making this happen. According to Alberta Education's Principal Quality Practice Guidelines, Leadership Dimension 2 - Embodying Visionary Leadership, "The principal collaboratively involves the school community in creating and sustaining shared school values, vision, mission and goals [and] ensures that planning, decision-making, and implementation strategies are based on a shared vision and an understanding of the school culture" (2009, p.4). Following the guidelines outline above will help ensure successful implementation of all school improvement projects and bolster the successful implementation of RTI within your school.

Removing any barriers that may inhibit the successful implementation of the RTI program is imperative. As leaders you must ensure that you have done due diligence to create the conditions that will allow your co-workers to fulfill their roles within the RTI

structure and implementation process. Only when all logistical considerations have been accounted for should you proceed to delegate duties among staff members. "People won't attempt a behavior unless (1) they think it's worth it, and (2) they think they can do what's required. If not, why try?" (Grenny & Patterson, 2013 p. 140). Teachers will need sufficient time, resources and professional development afforded to them if they are to maximize their contribution to student learning. Motivate them, ask them what they need, give it to them and then get out the way. Pink (2011) insists that if you have done a good job of fostering intrinsic motivation, removing barriers to success and provide autonomy, you have created a recipe for success.

Coordinating a schedule to assess every student in the school and collecting resulting data can be a daunting task even for schools that are sufficiently staffed and resourced. In cases where workload could stifle implementation success, Jim Collins calls for the use of what he calls technology accelerants (2012). Schools that are currently using Google for Education can utilize Sheets to organize incoming student data. It is important to remember that any information you put online has the potential to be seen by others. Work within divisional policies to ensure that the privacy of student information is maintained. Sharing digital documents among staff will increase productivity and organizational effectiveness. As a staff, look at what technology/programs are already available to provide mechanical advantage against the tremendous workload necessitated by the RTI implementation process.

Conducting interventions for students is a substantial undertaking including timetable adjustments, staff reassignment and allocation of physical space. Finding time in your schedule to help struggling students yourself will demonstrate that you believe in the program and that you are willing to get into the trenches alongside your staff for the betterment of your students.

Grenny and Patterson (2013) report that when trying to get people to change the way they do things, the most influential leaders lead by example. This has been shown to build credibility and trust between leaders and their employees. Leaders who sacrifice time, money, ego or previous priorities to model dedication will align other's efforts with their own. Modeling, in this manner, effectively fosters intrinsic motivation therefore decreases the use of extrinsic motivators and the need to manage others.

Jim Collins (2012) distinguishes great leaders from good leaders by insisting that great leaders demonstrate rigorous work ethic. They are the workhorses not the show horses Collins states. When colleagues witness the effort to help struggling students, they will be much more likely to replicate these efforts and do the same.

As the implementation leader, it is important to learn about the interventions that will take place and be familiar with programs that children and teachers are using. This will enable leaders to build capacity among staff, who are in need of professional development, and assist them until they are fully capable of administering interventions with fidelity.

If leadership teams have communicated their cause clearly among staff, thoroughly explaining why RTI is being implemented, crafted a clear shared vision and shared responsibility among staff, they are well on their way to building intrinsic motivation among stakeholders. Administrators need to remember that without buy-in, staff can resist and deflect change efforts making implementation difficult. Even after employing leadership strategies 1 through 4, there may still be individual staff members that have not bought in. The research of Daniel Pink (2011) cautions against resorting to a "carrot and stick" approach to make individuals comply with new initiatives. Using incentives can adversely extinguish intrinsic motivation and any form of reprimand will destroy individual autonomy.

Social scientists of all disciplines are currently discovering a critical behavioral characteristic about people and autonomy: "Your yes means nothing if you can't say no. There can be no commitment if there is no choice" (Grenny, Maxfield, McMillan, Patterson & Switzler, 2013, p.84). This statement reflects the importance of allowing people to be self-directed in making choice and committing to change efforts. If the initiatives feel forced or imposed by leadership, staff members desire to be autonomous can create resistance even when initiatives are imposed with good intentions. By informing stakeholders of the need for change an how change efforts will positively affect outcomes for stakeholders and students before implementing any changes, change leaders allow staff members the opportunity to align themselves with the direction of change efforts. "The instant you stop trying to impose your agenda on others, you eliminate the fight for control" (Grenny, Maxfield, McMillan, Patterson & Switzler, 2013, p. 87). Grenny et al. (2013) also found that motivation for change was bolstered by increasing staff ability to opt in or out of change efforts without recourse and noted that individuals worked much harder when acting on their own accord. "... a change of heart cannot be imposed ...people are capable of making enormous sacrifices when they have the agency to act on their own." (Grenny, Maxfield, McMillan, Patterson & Switzler, 2013, p.88). The age of managing with carrots and sticks died with the compliance model economy. In today's brain based economy of flattened leadership and creativity,

inspiration, innovation and autonomy are the new tools of leadership. When working to align staff motivation towards change efforts, leadership teams can utilize the powerful tool of storytelling to maximize alignment.

Telling stories is a timeless yet underutilized method of creating empathy, understanding and buy-in. According to Terry Small (2016) the most effective way to convey important information, change the way people think and align an audience with your point of view is through the use of stories. This promotes empathy among staff and builds motivation that will fuel the demanding effort that is needed from staff members to implement RTI. After hearing relatable stories, such as the one in the preface of this manual, stakeholders will be more likely to support the introduction of the RTI model making subsequent steps in the implementation process more successful. Another function of storytelling is to bring staff members together and unit their motivation and capability towards goals. Once motivation is united, collaborative change making is much more likely to occur organically. Collaboration is another powerful tool for eliciting full commitment and dedication among school staffs.

Leaders should use collaboration as a tool to create program buy-in whenever possible. Most staff members want to be part of the decision making process. All staff members can add value to building the four essential components of RTI and are instrumental in the implementation process. Using your staff's innovative capabilities will not only contribute to the quality of the RTI program, but will foster a sense of ownership and empowerment that results in increased buy-in. Making decisions in isolation and then imposing them will have the opposite effect and result in resistance. When school teams collaborate and work together to better the chances of student success, desired results are more likely to take hold and this is a cause for celebration.

Celebrations, when done in a deliberate manner, can also be a means to increase the effectiveness of change efforts and their implementation. Although incentives can have adverse effects on motivation, celebrating successes will help reaffirm commitment to the implementation process. Administrators should not wait for milestones to be met before celebrating. Celebrate small successes and incremental steps towards your broader goal. During celebrations, it is important for leaders to reiterate the vision and reaffirm why RTI is being implemented.

In the case that an individual goes above and beyond, at any point during the RTI creation or implementation process, expressing appreciation on behalf of the school by writing your thanks on school letterhead and hand delivering the letter can have a lasting effect on staff motivation and will increase alignment between staff members and leaders. This private expression of recognition of a staff member's commitment to students and the school will further solidify positive staff relationships and bolster dedication to the program. Letter writing is a form of appreciation that I personally use and have witnessed the positive effects of.

A major source of dissolution among Alberta teachers is the rapid pace that programs can take hold and then, often before positive changes occur, the program is pushed aside in favor of new priorities and forgotten about. Individuals, who have been in public education for any length of time, most likely can name a few examples that fit the description above. If teachers think that their effort will only be in vain, change leaders will not be able to foster intrinsic motivation and autonomy even if school teams believe
what leaders are doing is the right thing to do. Change leaders and administrators must communicate with staff and form a commitment that although the assessments, literacy programs, and technology in a school will change, the structure of RTI itself is here to stay. RTI is not a program that can be purchased; it is a way of doing business.

If RTI models are implemented with a clearly shared vision, built in collaboration with staff members, and school leaders create the conditions for it to be successful, it will not fade into obscurity like so many other school improvement initiatives have done in the past. "For change to be sustainable, leadership must extend beyond the school principal and become a shared responsibility involving school staff and the community" (Edmonton Regional Learning Consortium, 2014). By ensuring that all staff members feel a sense of ownership and commitment to your school's RTI program, it will be more resistant to changes in school or divisional leadership, staff turnover and changes in political policies that can affect school pedagogy. Building something that can withstand the constant shifting context of today's schools is a challenge that needs to be met head on through collaboration and shared responsibility.

Chapter 3: Methodology

This project was created in order to help school leadership teams implement RTI systems in their schools. To complete this project, a pool of carefully selected sources was collected, reviewed and then synthesized culminating in the creation of a literature review and a manual designed to assist educational leader's efforts during the RTI implementation process. The *Response to Intervention: A Guide to Implementation for School Administrators* manual will assist school administrators and staff understand what RTI is and why it should to be implement. The manual incorporates the RTI framework into individual components to be deliberately implemented in a step-by-step sequence. By following the step-by-step implementation process, laid out by the manual with fidelity, school teams can may improve their ability to implement effective RTI systems within their schools or districts. This methodology chapter provides a description of how each section of the RTI implementation manual was created. The sections of the manual are as follows:

- Section 1: Why RTI?: A rational for RTI implementation
- Section 2: What is RTI?
- Section 3: Universal Screening
- Section 4: Tiered Interventions
- Section 5: Progress Monitoring
- Section 6: Responsiveness

In order to assist school leaders with creating the conditions necessary to implement change initiatives, the following six leadership strategies were also included in the manual:

- Laying the foundation for change by starting with why
- Creating and sharing a vision
- Influence conditions to foster change
- Modeling
- Creating and maintaining motivation
- Creating continuity

Literature Review

An extensive literature review was conducted in order to the content for the specific sections of the manual. Current and relevant information pertaining to each section was compile and synthesized. The sources analyzed include books, government reports, reports from private organizations, academic journals and websites.

An broad search of the University of Lethbridge Library database system was conducted and included, but was not limited to, the following databases: Education Research Complete, ProQuest Education Journals, ERIC, Academic Search Complete, PsycINFO, SAGE Journals Online, Wiley Online Library and Teacher Reference Center (TRC). Search terms included, but not were limited to: RTI implementation, the history of RTI, progress monitoring and RTI defined.

The second round of information gathering was intended to pool information needed to create a synthesis of the most current and recognized publications on organization leadership and included publications by the following authors: Peter Senge, James M. Kouzes, Barry Z. Posner, James C. Collins, Steven Covey, Daniel H. Pink, Simon Sinek, Amy Cuddy, the Vital Smarts Network, Terry Small and Seth Godin. The purpose of reviewing these publications was to isolate key leadership strategies that can help educational leaders remove obstacles to change during school improvement initiatives. The information that was obtained during the literature review, on both RTI and leadership, was organized into a concise manual aimed at facilitating the RTI implementation process.

Creating the Response to Intervention: A Guide to Implementation for School Administrators Manual

In order to create the manual it was necessary to determine what information was pertinent to communicate with the target audience and then determine the most effective layout for conveying the information. School teams and administrators are often extremely busy, creating the need for information to be transferred efficiently. To make the information as easy to interpret and disseminate as possible, the manual was divided into specific sections. Each section was composed of a specific component of the RTI framework that can be implemented independently. The sections were laid out in sequential order. The component in section one must be in place before the component in the following section can be implemented and so on. Following the guide in order, can help enable schools to build a functioning RTI system in a step-by-step fashion. The guide was strategically designed so that if followed with fidelity, the result will be the implementation of a comprehensive and functional RTI system.

Leadership strategies aimed at smoothing the RTI implementation process were built into each section of the manual. By leveraging these strategies, school change leaders can help ensure that school improvement initiatives, such as RTI implementation, can take root with little resistance and maximum efficiency. The first section of the manual explains what RTI is and why the implementation of an RTI model of learning support is important. This necessary section helps stakeholders understand why RTI is important in terms of student learning. Perhaps most importantly, section one clearly communicates that RTI is the best option for deterring student underperformance.

The first section of the manual assists stakeholders in creating a clear understanding of what RTI is and how it benefits students; once this is accomplished, the manual will guide the next step in the RTI implementation process - building a shared vision. Crafting a shared vision for implementation is imperative before any school improvement effort can take hold. Understanding why change must take place and what the change will look like is crucial to motivating staff and creating the buy-in that is needed to bolster support for the implementation initiative. Section two is designed to support leadership teams through the process of building a shared vision among staff and other stakeholders. Because RTI necessitates that all staff members take a vested interest and are somehow intrinsically involved in the RTI process, a shared vision and sense of contribution to that vision is vital. Staff members must understand how they will contribute to the RTI process and how their efforts will lead to increased student success.

The majority of the literature reviewed, on RTI, came from books published on RTI housed in the University of Lethbridge Library and the Alberta Teacher's Association Library. The information in these books provided ample background information to establish the building blocks of this project including forming a definition of RTI and isolating the essential components of an effective RTI system. Many of the authors make suggestions, either based on experience or research, regarding how to implement different pieces of the RTI framework. These points on implementation helped round out many of the suggested implementation strategies that became a central component of the Response to Intervention: A Guide to Implementation manual.

Other guiding documents, which were used to inform the literature review and final project, include recent, online publications from various organizations and stakeholder groups. Source of online information were taken from Alberta Education, various regional professional development and assessment consortiums, the College of Alberta Superintendents, various educational action networks and university education departments.

Section two of the manual draws from several different sources related specifically to leadership and organizational implementation strategies. The Alberta Regional Consortium's (2014) publication Essential Conditions to Support the Implementation of Teaching Practices that Inspire Student Learning: Shared Vision was used to create the template that helps organize information in recorded text when creating the manual. Other sources of information that helped provide depth and accuracy to the leadership section of the manual contained information regarding how to motivate individuals and groups within an organization towards the implementation of improvement efforts. The insight provided by these publications helped create a scaffold and prescribed beneficial strategies that can be highly useful during the visioning process and implementation process.

Chapter 4: Overview of Response to Intervention: A Guide to

Implementation Manual

The online Response to Intervention: A Guide to Implementation for

Administrators manual [see Appendix A] was designed to be explanatory, containing key information on all of the four essential elements of the RTI Framework which include: universal screening, tiered interventions, progress monitoring and the response process. Embedded in each of these sections is a leadership strategy that is designed to help facilitate the implementation process involved in introducing each of the four key elements. Each section of the manual contains accompanying tools that can be utilized to facilitate the RTI process. By following the instruction laid out in each section of the manual in sequential order, school teams will create and implement a fully functional RTI system.

School-wide screening is the first essential component discussed in the manual. When creating this section of the manual, it was important to include various suggested methods of efficiently completing school wide screening. Suggesting to staff members that the entire student population of the school will be assessed against agreed upon benchmarks three times a year may, at first, seem like an impossible task. With all of the other commitments, teachers may hear this and immediately feel overwhelmed. In order to counteract this, the manual was designed to provide insight into how other schools have accomplished this daunting task. The idea here is that this will help school teams envision how this might look within their own context. A data management tool has been created and included in the manual to help track progress when conducting schoolwide screening. The School-Wide Screening Tracking Tool was created using common software (in this case Microsoft Excel) in an editable format so that school teams can modify the document as needed.

The manual is designed to assist with determining the benchmarking tools to be used during the screening process. Many school teams that have considered moving towards a common, school-wide benchmarking tool recognize that finding consensus regarding what tool should be used is no easy task. Needless to say the school context, budget and other factors will play a crucial role in determining what benchmarking tool is selected and school teams must consider all of these factors in order to select the most effective tool. The manual was designed to smooth this process by providing insight into how benchmark screening can be carried out in different contexts. The manual also promotes the use of pros and cons lists to help school teams weigh their options and consider different perspectives.

After developing and implementing a process of school-wide screening, the next targeted implementation was aimed at planning and providing tiered interventions for students who are unable to achieve grade level benchmarks when provided with only regular classroom instructional practices. The manual was designed to help school teams determine what intervention program to use and how to organize a schedule where by all student who need intervention receive it in a timely manner. An example of a four tiered, electronic Pyramid of Interventions was included in the manual to serve as a possible model for schools to utilize in their RTI process. The manner of using the Pyramid of Interventions as a graphic organizer, to scaffold grade level and/or learning support meetings around discussion about student learning needs is also described within the manual.

Following the tiered intervention system, the manual focus shifts to implementing and carrying out progress monitoring. Progress monitoring is designed to provide stakeholders with assessment data at regular and frequent intervals to show student progress towards benchmark indicators. Progress monitoring should be low cost, easy to administer and frequently repeatable. In many partial RTI systems, progress monitoring systems are not established. "Progress monitoring sometimes is the forgotten cousin of benchmark screening. Yet it is the most important part of the RTI process" (Hall, 2012, p. 63). Along with school-wide screening, progress monitoring provides data that informs stakeholders and forms the basis for the decision making process in RTI. The manual emphasizes how important progress monitoring is, guides one to carryout progress monitoring and provides information on how to organize the resulting data efficiently. This section of the manual includes an example of a student PM Data Graph as a model. For that example, the graph was created using Google Sheets and is sound method of increasing the rapid discernibility of student progress in comparison to benchmarks.

The final section of the manual describes how school teams, in RTI capable, schools collaboratively respond to progress monitoring data to make necessary and beneficial adjustments to student programing. It is important that as leaders in the RTI implementation process, principals ensure that resources, professional development and time are available for staff members to administer assessments, gather PM data and collaboratively analyze it with regularity. The manual describes many ways in which researches suggest responding to PM data in order to create desired results. It is this responsiveness that delineates the RTI model from traditional models of learning support. Following the creation of the Response to Intervention: A Guide to Implementation for School Administrators manual, distribution to schools and next steps in maximizing the manual's impacts were undertaken in a systematic and deliberate manner. Chapter 5 is a discussion regarding the knowledge transfer, limitations and impact of the Response to Intervention: A Manual to Implementation for School Administrators.

Chapter 5: Discussion

The aim of the Response to Intervention: A Manual to Implementation for School Administrators manual is to assist school administrators with creating effective RTI systems and smoothing implementation process. To ensure that the manual serves its intended purpose, a focused distribution plan was undertaken.

Knowledge Transfer

In order to put the manual into the hands of those who would actually use it, I will use a very systematic dissemination plan. I have forwarded a copy of the manual to the Director of Learning and Innovation at a school division in southern Alberta. After reviewing the manual, the Director of Learning and Innovation has asked that the manual be shared and studied at the next divisional Literacy Committee meeting. The divisional Literacy Committee is comprised of administrators and teachers from schools across division. Each of the committee members has been asked to sit on the board because of their expertise, or interest in literacy education making this a prime audience for this manual. Each committee member functions as a school representative who is tasked with bringing resources and instructional strategies from the committee back to the school. After collaboratively reviewing the manual, it is my hope, that committee members will take the manual and discussion notes to their school administrative teams for further discussion.

I have also published the manual online at this link. Having the manual hosted on the internet makes it very easy to send out a link to the document that will be both downloadable and editable. This ease of access and workability will increase the efficiency of using the manual. Because both administrators and teachers have demanding schedules the manuals ease of use is paramount. By increasing the ease of access and use, I hope to improve the frequency that school teams access and use the manual. By making the manual readily available and putting it in the hands of the right people, I hope that schools throughout Livingstone Range school Division will utilize it for its intended purpose and in turn improve student learning throughout the division.

Limitations

Response to Intervention: A Guide to Implementation for School Administrators has some limitations. Among these limitations is that fact that the manual is brief in its discussion regarding what RTI is and the components that comprise RTI. Reading supplementary sources such as books regarding RTI or the literature review that was completed as part of this project will enable school administrators and other stakeholders to more fully understand RTI in its entirety. Having a comprehensive understanding of RTI and how it is intended to work to improve student learning is fundamental to ensuring that it is implemented with fidelity and will help ensure that the both the implementation process and the resulting program are optimally effective.

Another limitation of the project is that it was designed to be general is scope and lacks examples of how to utilize RTI within specific subject areas. Many sources provide insight into how RTI can be used to improve literacy or numeracy skills specifically. These sources should be used in conjunction with the *Response to Intervention: A Manual to Implementation for School Administrators* to provide focused improvement in specific subject areas identified by school teams as being in need of improvement. Many schools have had success using RTI to improve literacy, numeracy and/or social emotional skills for students and these examples can help school leaders learn how to utilize RTI to improve students' success within their own buildings n(Dexter, Hughes, & Farmer, 2008; Gibbons, 2008; Hammer, 2012; Maskill, 2012; Whittaker, 2013). These examples should be collected and used in conjunction with the *Response to Intervention: A Manual to Implementation for School Administrators* to maximize student learning.

Conclusion

Why should schools invest time, resources and energy towards the implementation of RTI? "First, it's the right thing to do. A plethora of evidence has documented how past and current special education programs are not meeting students' needs. RTI has been shown to provide an effective mechanism by which students can receive the instruction they need" (Brown-Chidsey & Steege 2010, p. 188). According to Bender and Waller (2011) "20-25% of students have some difficulty reading in early school years" (p. 6). Many of these students would not be able to make benchmark standards without appropriate interventions. In previous educational models, these students were often labelled as having learning disabilities, leading to a trend of overdiagnosis and lack of available supports following diagnosis. Brown-Chidsey and Steege (2010) recognize that RTI is a proven way of changing how students are diagnosed with learning disabilities, ensuring that diagnosis is far more accurate and supports are in place before diagnosis is even initiated. "Data collected from the ST. Croix River Education District over the past 11 years have shown a 50% reduction in the number of students identified as LD. At the same time, major gains in achievement for all students have been demonstrated." (Burns & Gibbons, 2012, p. 158).

The old *waiting-to-fail model* is counter intuitive. Moreover, it is at odds with current best practice. The push towards inclusive education systems has increased the demands for accountability and differentiation from teachers. RTI provides the framework that ensures all possible resources in an educational system are utilized to support the learning of students. "They can no longer be 'your kids' and 'my kids'; they are all 'our kids'" (Burns & Gibbons, 2012, p. 165). Margaret Searle (2010) eloquently states in the final passage of the section titled: Compassionate and Competent Education, "RTI is the support system that enables teachers to work as a team with continuous improvement. RTI is the right thing to do" (p. 183). Many researchers, who study RTI, agree that it is a promising educational methodology that has been shown to increase student learning and reduce time to receive needed interventions (Dexter, Hughes, & Farmer, 2008; Gibbons, 2008; Hammer, 2012; Maskill, 2012; Whittaker, 2013). Brown-Chidsey and Steege (2010) affirm this consensus while concisely asserting why RTI is the best option for school improvement. They contend "Although RTI is still an emerging methodology, we believe that it offers great promise for increasing the likelihood that all students will be successful in school" (p. 188).

The Response to Intervention: A Manual to Implementation for School Administrators manual is designed to assist school administrators with creating effective RTI systems and smoothing implementation process. By using this manual, in combination with supplementary sources of information pertaining to RTI, school teams can improve their ability to implement educational improvement initiatives that ensure that all students receive the level of instruction that need to maximize their chances at success in a timely manner. It is this timely identification of students in need of extra support and subsequent delivery of tiered interventions of increasing intensity that characterize RTI and make it an effective system for improving student learning and success.

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Appendix A

The Response to Intervention: A Guide to Implementation for School Administrators Manual

Response to Intervention



A Guide to Implementation for School Administrators

By Jason Clifton

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Preface

As a young boy, one of my clearest memories of early elementary school is of an after school meeting difficulties I was experiencing in each of my subject areas. My mother and father, both of whom were former ceachers, recognized that the root of my problem stemmed from a severe reading deficit. For the next three attending with my parents, teachers and principal. The adults in the room took turns discussing the years my mother woke me up a half hour early and we read together for 30 minutes every day.

and designed systems to organize RTI data for hundreds of students. I have seen RTI not only decrease, but reverse gaps in student literacy rates. I know that most students do not have a mother who can read to them and assisted two other schools in doing the same. I have presented my work to divisional administration and As an administrator, I have designed and implemented reading intervention programs at two schools board members from all of the zone six area. I have sat on the Livingstone Range School Division Literacy Committee. I have personally provided reading intervention and progress monitoring for over 100 student for 30 minutes each morning without fail. That is why I believe that implementing and maintaining RTI is essential in every school

implementing RTI systems in their organizations. When implemented systematically and with fidelity, RTI can students learning (Brown-Chidsey & Steege, 2010). This manual also outlines leadership qualities and techniques that can be utilized to increase staff motivation for change and smooth the implementation ensure that schools are using best practice pedagogy and systems organization in order to maximize This manual is designed to assist school leadership teams in the process of creating and process to help ensure that desired results are met.

young man who had strong work ethic and excelled changed the way I view teacher referral systems of In 2011, I reviewed the Grade 3 PAT results most part, the results were unremarkable, with one any of the meeting minutes from any grade level or PATs. Dario was a quiet, extremely well-mannered discovered that this young man could not read and learning support meetings. He must have bombed at athletics. No teacher had ever referred Dario to the test on purpose, right? No, after several follow /ery apparent exception. A boy, whom we will call Dario for the purposes of this story, had failed his earning support for extra help and he was not on ad slipped through the cracks for three years at up literacy assessments were administered, we as part of a school administrative team. For the our school. This is a true story and it forever administering support and intervention

Leadership Strategy 1: Start with Why

eaders assume that their coworkers understand why an improvement initiatives a reality. "People don't buy what you do, they buy why you do it" (Sinek, 2011, p. 37). It community that leaders can realize the transformational suggests that this may cause the initiative to fail before administrators sharing their vision of the changes they Simon Sinek – insists that expressing why is the most initiative is being implemented in the first place. Many Anthropologist, ethnographer and leadership expert changes necessary to make the transition to an RTI mportant leadership strategy for ensuring that you motivate all necessary stakeholders to help make Many improvement initiatives fail because s only by eliciting the support of school staff and t even begins (Sinek, 2011). It is imperative that school improvement initiatives begin with school mportant step in the change process, research would like to see. Although this is an extremely eaders start by communicating why change is necessary before taking any other steps. nodel a reality.

dentified. This slow and often ineffective model has beginning to receive much needed intervention and support, children frequently have to demonstrate a gap in performance over a period of time. Once the ntervention begins. Under this model, children with became the responsibility of the school as a whole significantly learning disabilities were sometimes even then the intervention was turned over to an students who need intervention are simply never (Burton and Kappenburg, 2012). In some cases, education is often used to assign a code before become commonly referred to as the wait-to-fail shown to have waited almost two years before diagnosis from an expert outside of the field of educational assistant or the teacher and never In order to receive special services in a medically-based disabilities model of learning child is identified, often by teacher referral, a model

Leadership Strategy 2: Shared Vision

In comparison to other school improvement initiatives, RTI is a relatively broad and extensive undertaking that requires significant time, resources and the full support of all staff members. In order to align staff motivation with RTI implementation, it is imperative for change leaders to create an understanding among their staff about why RTI is so important. Staff members must understand what RTI is and how it helps student succeed.

earning at the center of initiative will promote buy-in do to fulfill their role throughout the change process. effectively leading change in their 2012 publication: A strong, clearly articulated vision that puts student stakeholders with your cause, they must be able to oles within the program and the work they need to and Barry Posner list "Inspiring a shared vision" as conceptualize what the outcome will be, their own mplementation process. Authors James Kouzes model needs to be implemented, school leaders and align the efforts of all involved in a common Once all stakeholders know why an RTI can work to carefully craft and communicate a The Leadership Challenge. In order to align one of the five most important strategies to shared vision of change that will guide the direction.

our system of serving students with diverse learning designed to be far more proactive (in comparison to raditional educational models), promising to quickly supports. "RTI is a research-proven framework with schools" (Edmonton Regional Learning Consortium, needs must undergo transformation, RTI provides ates. With mounting evidence demonstrating that nstitute of Child Health and Human Development NICHD, 2006). These studies provide a clear link petween early intervention and increased literacy Response to intervention (RTI) models are perhaps the most comprehensive and promising 2015). Another major reason for the increased difficulties, in particular, the national network of esearch studies coordinated by the National dentify at-risk students and provide needed potential to create enduring improvement in abundance of recent research on reading nterest in an RTI approach has been the alternative

Leadership Strategy 2: Shared Vision

As an administrator, you will need to ensure that Dimension 2 - Embodying Visionary Leadership, a shared vision is central to making this happen. shared school values, vision, mission and goals school years' worth of effort and determination. /ou have the support of your staff and creating Make no mistake; implementing RTI with and implementation strategies are based on a idelity will require the entire staff, a great deal of school resources and typically two to three and] ensures that planning, decision-making, successful implementation of RTI within your school community in creating and sustaining shared vision and an understanding of the According to Alberta Education's Principal 'The principal collaboratively involves the school culture" (2009, p.4). Following the guidelines outline above will help ensure Quality Practice Guidelines, Leadership successful implementation of all school mprovement projects and bolster the school

describes the changes that took place in the Chisago Lakes School District from the period 1996 to 2007 following the introduction of RTI that: In addition, the percentage of students reaching the grade-level standard on the statewide assessment increased from 51 percent earn at high levels (Dexter, Hughes, & Farmer, 2008; Gibbons, 2008; Hammer, 2012; Maskill, 2012; Whittaker, 2013). Gibbons (2008) in 1995. Gibbons insists that the percent of students meeting benchmark target literacy scores rose from 35 to 70. Gibbons also states at the model's inception to 80 percent in 2005. This is a slightly faster increase than that of the state overall. Finally, the percentage of Response to Intervention (RTI) can be an effective method of giving every student the additional time and support needed to students identified as learning disabled has dropped dramatically over the past decade, by 50 percent. (p. 13),

program on academic achievement or performance included results that showed some level of improvement, with the auditors attributing Hughes, Farmer and Thomas (2008). Dexter, Huges, Farmer and Thomas (2008) state that "Each study examining the impact of an RTI readers in terms of improving their specific reading skills." (p. 97). Adding to the body of research that supports a statistically significant correlation between RTI implementation and increased student performance are the results of the meta-analysis conducted by Dexter, A more recent study conducted for the U.S Department of Education showed similar findings. Although there was a statically significant negative correlation between students receiving tier 2 and 3 intervention programs who were close to the grade level cut reading interventions provided in a small-group setting (either within small groups or one-on-one) could be beneficial to early-grade score, Balu et al., (2015) state that "recent studies support the conclusion that well-designed and closely monitored supplemental the changes to the RTI approach that was used" (p. 6).

in many school and school divisions. They contend that although RTI is still a relatively new pedagogical practices, it may offer the best promising alternative. Brown-Chidsey and Steege (2010) affirm this consensus while concisely asserting why RTI is of growing interest framework with potential to create enduring improvement in schools" (Edmonton Regional Learning Consortium, 2015). Another major provide a clear link between early intervention and increased literacy rates. With mounting evidence demonstrating that our system of national network of research studies coordinated by the National Institute of Child Health and Human Development. These studies reason for the increased interest in an RTI approach has been the abundance of research on reading difficulties, in particular, the Response to intervention models are designed to be far more proactive (in comparison to traditional educational models) promising to quickly identify at-risk students and provide needed supports. "Response to Intervention (RTI) is a research-proven serving students with diverse learning needs must undergo transformation, RTI provides perhaps the most comprehensive and possible method of ensuring that all children succeed to the best of their abilities

What is RTI?

resources in a school in order to be proactive, responsive and help educators make informed decisions about student learning. There are four essential components that are crucial to RTI is not a product or program that can be purchased; it is a way of organizing high functioning system of RTI:

- population, three times per school year, to isolate individuals who are below grade level School-wide screening - This is an assessment completed by the entire student benchmarks.
- Interventions A systematic method of providing interventions for students identified as being below grade level benchmarks.
- Progress monitoring An effective way of tracking student's progress towards grade level benchmarks and effectively communicating progress with all stakeholders.
- Responsive program planning A system of checks and balances to help ensure that interventions are having the desired effect and that interventions are discontinued for students who no longer need them.

detail while providing information and resources that administrators can use to implement RTI The following four sections of this manual explain each of the above components in at their schools.

Essential Component 1: School-wide Screening

September and October, then again in January and appropriate critical skills" (School Wide Screening, performance, screening provides a safety net that quickly. Universal screening takes place near the The National Research Center on Learning once more during May. Individual student results are compared to benchmark standards of what intervention is administered where it is needed student ability levels are expected to be at that point in the school year. "Examining the entire assessment that is characterized by providing resources most effectively" (Burns & Gibbons, catches students early helping to ensure that Disabilities describes screening as "a type of students to demonstrate significant gaps in beginning of the school year, between mid-2006, p. 4). Instead of passively waiting for determine how to use valuable yet scarce quick, low-cost, repeatable testing of agegrade level of students allows teachers to 2012, p. 26).

Leadership Strategy 3: Influence Conditions to Foster Change

mperative. As leaders you must ensure that you have allow your co-workers to fulfill their roles within the RT members. "People won't attempt a behavior unless (1) what's required. If not, why try?" (Grenny & Patterson need, give it to them and then get out the way. Daniel structure and implementation process. Only when all they think it's worth it, and (2) they think they can do emoving barriers to success and provide autonomy, resources and professional development afforded to student learning. Motivate them, ask them what they done due diligence to create the conditions that will should you proceed to delegate duties among staff Pink author of Drive (2013) insists that if you have Removing any barriers that may inhibit the logistical considerations have been accounted for successful implementation of the RTI program is them if they are to maximize their contribution to 2013 p. 140). Teachers will need sufficient time, done a good job of fostering intrinsic motivation, you have created a recipe for success.

Essential Component 1: School-wide Screening

Universal screening data not only contributes to isolating students in need of intervention, it also helps pinpoint highpriority areas of concern. Screening provides data that helps schools answer fundamental questions: Are there issues with core programming? Is there a particular subject area that needs to be bolstered? Are there inconsistencies between grade levels? What should we keep and what needs to be dropped or updated?

School teams will need to meet and determine what assessment makes the most sense for the purposes of screening. Many schools already have programs in their buildings that make suitable screening tools. These tools assess students against grade-level benchmark standards, helping to identify students in need of interventions. Carefully weighing the pros and cons of each assessment, in collaboration with staff, can help isolate the best tool for the job, while creating a shared understanding of why that specific tool was selected.

Once the best fit assessment tool has been selected, ensure that all staff members are trained to administer it with fidelity. Enlisting all staff members in screening efforts will enable you to provide ample support for teachers, so that the task of assessing the entire student body will not be left up to them alone. Provide all of the support that you can and remember that many hands make light work.

Leadership Strategy 3: Influence Conditions to Foster Change

(2012). Schools that are currently using Google the use of what he calls technology accelerants Coordinating a schedule to assess every remember that any information you put online remendous workload necessitated by the RTI echnology/programs are already available to data can be a daunting task even for schools implementation success, Jim Collins calls for student in the school and collecting resulting that are sufficiently staffed and resourced. In has the potential to be seen by others. Work privacy of student information is maintained for Education can utilize Sheets to organize within divisional policies to ensure that the provide mechanical advantage against the Sharing digital documents among staff will incoming student data. It is important to increase productivity and organizational effectiveness. As a staff, look at what cases where workload could stifle mplementation process Essential Component 1: School-wide Screening

Link to SWS Data Management Tool

The SWS Management Tool is just one example of how a school can use existing programs to facilitate the logistical operations required to screen an entire school.

This simple yet effective organizational tool is used to gather assessment data into one centrally located document and can be created using Word, Excel, Google Docs, Google Sheets or a plethora of other widely available programs.

In this example, the first column houses student names while the 4 subsequent columns house student results. The last column is used to flag students, who are not meeting benchmarks, for intervention. Providing the entire staff editing rights allows many individuals to enter scores which eases the process of collecting data that results from school-wide screening. As always be sure to keep student data secure by following divisional policies.


Essential Component 2: Tiered Interventions

"To accommodate students with varying learning levels of need, services for RTI are provided within a multi-tier framework" (Glover, 2010, p. 9). The three-tiered structure outlined by the RTI model is commonly referred to as the Pyramid of Interventions. The pyramidal shape serves as a graphic organizer in which students are placed into the different tiers based on their need for different intensity of instruction. Simply put:

- Tier 1: no intervention is needed. Roughly 80-85% of students will not require intervention under normal school contexts.
- Tier 2: targeted small group Intervention is required. Roughly 10-15% of students will need interventions a minimum of once a week
- Tier 3: intensive individualized intervention required up to several times a week. Approximately 5% of students fall into the tier 3 category in most school.

"The available research suggests that multiple tiers of interventions in an RTI process seem to alleviate reading problems for those 75 to 90% of students who initially struggle in reading" (Glover, 2010, p. 9).

Leadership Strategy 4: Model

Conduct interventions for students. Finding time in your schedule to help struggling students yourself will demonstrate that you believe in the program and that you are willing to get into the trenches alongside your staff for the betterment of your students.

Joseph Grenny and Kerry Patterson, authors of the New York Times best seller: Influencer (2013), report that when trying to get people to change the way they do things, the most influential leaders lead by example. This has been shown to build credibility and trust between leaders and their employees. Leaders who sacrifice time, money, ego or previous priorities to model dedication will align other's efforts with their own. Modeling, in this manner, effectively fosters intrinsic motivation therefore decreases the use of extrinsic motivators and the need to manage others.

Essential Component 2: Tiered Interventions

Carefully selected and specifically targeted interventions resources. It is crucial to spend time examining research-based, leadership may also be able to make suggestions as they have and in other divisions. Interventions that are easy to administer supported literacy intervention system (Ransford-Kaldon et al., administer and track. Two examples of commercially available programs that can help provide content for school intervention and provide assessment feedback are most suitable for Tier 2 a broader knowledge of what is in use throughout the division Mathletics. Fountas and Pinell is a widely used and evidence instant feedback loop to support numeracy intervention when programs are Fountas and Pinnell Intervention Systems and academic interventions before selections are made. Look to while Tier 3 interventions may require more intense effort to 2010), while Mathletics can provide extra practice with an staff for suggestions that they are familiar with. Divisional will yield maximum results from the expense of precious used in a targeted and deliberate support plan.

Determining who will carry out interventions and when they will take place will also require collaboration and planning. Use an open mind when reviewing the school timetable and think outside the box when recruiting individuals that can help administer small group interventions. Learning Commons Facilitators, volunteers and even older students can provide interventions when properly supervised and trained.

Leadership Strategy 4: Model

Jim Collins, author of Good to Great (2012), distinguishes great leaders from good leaders by insisting that great leaders demonstrate rigorous work ethic. They are the workhorses not the show horses Collins says. When your colleagues witness you efforting to help struggling students, they will be much more likely to do the same.

As the implementation leader, it is important to learn about the interventions that will take place in your building and be familiar with programs that children and teachers are using. This will enable you to build capacity among staff, who are in need of professional development, and assist them until they are fully capable of administering interventions with fidelity.



created using Adobe Photoshop and Smart deal of ease. Using graphic organizers like level/learning support meetings. By linking Notebook. The Pyramid of interventions is Interventions in combination with targeted profile, stored on the school shared drive, up and edited collaboratively with a great a great visual organizer that can be used programs, student profiles can be pulled student information is a powerful way to electronic Pyramid of Intervention that I focus learning support and grade level meetings around student learning and or within student information software each student's name tag to a learner The image to the left is of an to guide discussion during grade this example of the Pyramid of improvement.



Essential Component 3: Progress Monitoring

Progress Monitoring (PM) is the use of frequent assessment data to track student progress towards benchmark standards. Progress monitoring should take place for all students who are receiving tier 2 and 3 interventions as part of the RTI process. Hall (2012) states that "Progress monitoring sometimes is the forgotten cousin of benchmark screening. Yet it is the most important part of the RTI process" (p. 63). "PM is designed to give short, regular, frequent, and intermittent assessments rather than extensive testing data" (Burton and Kappenberg, 2012, p. 23).

Along with school-wide screening, progress monitoring provides data that informs stakeholders and forms the basis for the decision making process in RTI. According to Brown-Chidsey & Steege (2010) frequent feedback on student progress increases student performance. PM data points should be gathered monthly at minimum and more frequently for students that require more intense intervention.

Leadership Dimension 5: Create and Maintain Motivation

If you have communicated your cause clearly to your staff, thoroughly explaining why RTI is being implemented, crafted a clear shared vision and shared responsibility among staff, you are well on your way to building intrinsic motivation among stakeholders. Remember that without buy-in, staff can resist and deflect change efforts making implementation difficult. Even after employing leadership strategies 1 through 4, there may still be individuals among your staff that have not bought in. The research of Daniel Pink (2012) cautions against resorting to carrots and sticks to make individuals fall in line. Using incentives can adversely extinguish intrinsic motivation and any form of reprimand will destroy individual autonomy.

Essential Component 3: Progress Monitoring

Neighing the pros and cons of each candidate program ier 2 and 3 interventions in relation to benchmarks. PM administer interventions and both provide frequent data although there is inconsistent research data supporting tools can reduce the time spent in the capacity building frequency will help provide the necessary data needed Selecting intervention programs that also serve as PM to understand the current progress of every student in collaboratively and with ample time. Take the time to that shows student's progress towards benchmarks nterventions and progress monitoring tools for your administering PM assessments, but may not be the assessments should be easy to administer and are ook at what is already available in your school and effective tool of improving student comprehension. Selecting tools that can be administered by deally part of selected intervention programs. For phase of implementation and ease the process of Systems and Accelerated Reader can be used to several staff members with a degree of ease and the effectiveness of Accelerated Research as an esearch programs that other schools are using. best choice for every school. Selecting the right example, both Fountas and Pinnell Intervention will help ensure that the right decision is made. school is one of the most critical pieces of the implementation process and should be done

Leadership Dimension 5: Create and Maintain Motivation

The statements below encapsulate what social scientists, of all disciplines, are currently discovering about people and autonomy: "Your yes means nothing if you can't say no. There can be no commitment if there is no choice." "The instant you stop trying to impose your agenda on others, you eliminate the fight for control." "... a change of heart cannot be imposed ...people are capable of making enormous sacrifices when they have the agency to act on their own." (Grenny, Maxfield, McMillan, Patterson & Switzler, 2013, p.84,87,88). The age of managing with carrots and

the age of managing with carrots and sticks died with the compliance model economy. In today's brain based economy of flattened leadership and creativity, inspiration, innovation and autonomy are the new tools of leadership (Pink 2012).

-eadership Dimension 5: Create and Maintain Motivation

and buy-in. According to Terry Small (2016) the most effective way to convey important information, change the stakeholders will be more likely to support the introduction of the RTI model making subsequent steps in the Tell stories. Telling stories is a timeless yet underutilized method of creating empathy, understanding way people think and align an audience with your point of view is through the use of stories. This promotes members to implement RTI. After hearing relatable stories, such as the one in the preface of this manual empathy among staff and builds motivation that will fuel the demanding effort that is needed from staff implementation process more successful.

staff's innovative capabilities will not only contribute to the quality of the RTI program, but will foster a sense of ownership and empowerment that results in increased buy-in. Making decisions in isolation and then imposing building the four essential components of RTI and are instrumental in the implementation process. Using your Collaborate. Leaders should use collaboration as a tool to create program buy-in whenever possible. Most staff members want to be part of the decision making process. All staff members can add value to them will have the opposite effect and result in resistance.

Celebrate. Although incentives can have adverse effects on motivation, celebrating successes will help reaffirm commitment to the implementation process. Do not wait for milestones to be met before celebrating. Celebrate small successes and incremental steps towards your broader goal. During celebrations, it is important to reiterate the vision and reaffirm why RTI is being implemented.

etterhead and hand delivering the letter. This private expression of recognition of a staff member's commitment to students and the school will further solidify positive staff relationships and bolster dedication to the program. implementation process, express your appreciation on behalf of the school by writing your thanks on school Recognize. If an individual goes above and beyond, at any point during the RTI creation or

Essential Component 3: Progress Monitoring

PM data for each student can be graphed making it far easier to interpret data and determine whether or not students are on track to meet grade level benchmarks. The graph to the right details the progress of a hypothetical Grade 2 students who received interventions and progress monitoring from September to May of 2016 before surpassing the benchmark, exiting tier 2 and discontinuing interventions.

This graph was created using Google Sheets where PM data was entered by an educational assistant following each intervention session. There are several online tutorials that detail how to use Google Sheets and create charts/graphs in Google Sheets

(https://support.google.com/docs/answer/63728?co=GENIE.Platform%3DDesktop&hl=en). By becoming familiar with and leveraging the programs already available to your school, organizing PM data can be an easily manageable task.

It is important to remember that any information you put online has the potential to be seen by others. Work within divisional policies and take the necessary steps to ensure that the privacy of student information is maintained.



tools that can be used by staff members to serve their intended purpose. Schools also need to consider how programs to make it work. School wide screening, interventions and progress monitoring systems all require they will organize and share all of the resulting data that is produced as part of the RTI process. Here are 3 RTI is not a program that can be purchased, but it will require schools to adopt the use of other steps to help with the selection process

1) Use evidence to select tools. School staffs should use multiple different sources of information to inform their decision about what tools to select.

evidence-based intervention is one that has been shown, in controlled research studies, to be efficacious in and positive student outcomes. Is there research data that shows the intervention can reliably yield desired intervention efficacy by searching for evidentiary support that shows correlation between intervention tools According to Planning Realistic Implementation and Maintenance by Educators (PRIME, 2012) "An improving student outcomes (i.e., achievement or behavior)" (p. 2). Implementation teams should ensure results during research trials?

sponsored the research. If the intervention publisher or vendor sponsored the study then study bias could be The Texas Education Agency (2013), has outlined several factors to look for when reviewing studies teachers or researchers and was the study conducted within the school at off campus. Whenever possible, regarding specific interventions and their efficacy. Things to consider when analyzing studies include: is it research that is conducted under conditions similar to that which the intervention will be administered in is peer-reviewed, number of students in the study, the characteristics of the demographic studied, and who existent. The context of the study should also be considered such as who conducted the interventions, most desirable.

positive outcomes for students in repeatable research validated studies conducted by reputable institutions The research of Carolyn Denton (2012) shows that interventions that have been shown to produce yield better results in real-world conditions than unsubstantiated programs.

because they have the unique advantage of enabling researchers to evaluate the such as public school classrooms taught by regular... in school settings similar to intervention effectiveness in isolation of other factors. In this methodology design the intervention group and control group should be closely matched in academic yours, before you can be confident it will work in your schools and classrooms" Education (2013) also states that, "the intervention be demonstrated effective, Sciences National Center for Education Evaluation and Regional Assistance implementation, and that these sites be typical school or community settings. assignment to intervention and control group produce the most reliable data through well-designed randomized controlled trials, in more than one site of According to the U.S. Department of Education Institute of Education capability as well as demographic characterizes. The U.S. Department of (2003) studies that utilize a randomized control trial method with random

teams' efforts at selecting research-backed intervention and screening programs is the effectiveness of intervention programs related to RTI and can be used by staffs during internet. The table below houses several online sources of information regarding the Perhaps the most robust source of information that can help guide implementation the selection process.

| Organization or Agency | Initiative | Scope | Websites |
|---|---|---|---|
| National Institute of Child Health and Human Development | National Reading Panel | Review of research on how children learn to read and information on evidence-based methods for teaching reading | http://www.national- readingpanel.org/Publi cations/summary.htm |
| Institute of Education Sciences | What Works Clearinghouse (WWC) a central, independent, and trusted source of scientific evidence of what works in education. | Practice guides for research-based practices (WWC) / videos and tools to translate research-based practices to schools | ies.ed.gov/ncee/wwc and dww.ed.gov |

| | i on evidence-based lincs.ed.gov/ ctices | for meeting the www.ncela.gwu.edu al needs of English earners | and resources for www.interventioncen- ind class- and school- tral.org smic and behavioral | training and evidence- essional development or supporting students ities | is and modeling videos ebi.missouri.edu nal evidence-based s. | ource for educators and www.bestevidence.org s of scientific reviews of rograms for children in 2 | <pre>purce for educators of www.teachingld.org/ ith learning disabilities Id_resources/default. htm</pre> | n about research-based www.fcrr.org elated to literacy and assessment for pre-school through |
|---------------------------|--|--|--|---|---|--|---|---|
| | Information literacy pra | Resources instructiona language le | Information individual a wide acade issues | Interactive based profe resources f with disabil | Description of educatio frameworks | Online resc researchers variety of p grades K-1. | Online resc students wi | Informatio practices re instruction children in 12th grade |
| Doing What Works (DWW) | Information and Communication System (LINCS) | National Clearing- house for English Acquisition and Instructional Edu- cational Programs (NCELA) | | | | | Teaching LD | |
| | National Institute for Literacy | Office of English Language Acquisition (OELA) | Intervention Central | The IRIS Center | Evidence-Based In- tervention Network | Best Evidence Encyclopedia | Division for Learning Disabilities (CEC) | Florida Center for Reading Research |

| OSEP Technical | Information on implementing | www.pbis.org |
|----------------------------|--------------------------------------|-------------------------|
| Assistance Center of | positive behavior intervention and | |
| Positive Behavioral | supports sponsored by the | |
| Interventions and | Department of Education | |
| Supports | | |
| The Promising | Web site highlights programs and | http://www.promising |
| Practices Network | practices that credible research | practices.net/ |
| | indicates are effective in improving | |
| | outcomes for children, youth, and | |
| | families | |
| The International | Offers a registry of systematic | http://www.campbell |
| Campbell | reviews of evidence on the effects | collaboration.org/Frali |
| Collaboration | of interventions in the social, | brary.html |
| | behavioral, and educational | |
| | arenas. | |

This table was adapted from Planning Realistic Implementation and Maintenance by Educators (2012) p. 4-6

Another source of unbiased information regarding educational programs and tools can Deliberating over and interpreting research data can be a daunting task for many come from local university education departments who often consult to help schools staff members, particularly if they are unfamiliar with data analysis. Consider asking Most divisional offices have directors of learning and innovation who are often well versed in pedagogical research and may be familiar with several tools that can be appropriate members of divisional office to provide suggestions as to what works. effectively used for school wide screening, interventions, or progress monitoring. design and implement school improvement initiatives.

- multiple grades and teach a plethora of subjects, volunteers, older students and technology may need are already familiar with and what resource you can commit towards the RTI implementation initiative. different solutions. Often times in small rural schools where staff members are already spread across tools for the various components of RTI. Consider what you already have, what your staff members In many cases the pieces already exist within a school and it is just a matter of configuring them in Consider context. Many schools already have programs in place that can be used to serve as to be leveraged to make things work. In larger schools determining common tools and providing the right order to make RTI work. The needs of every site are different and should be met with professional development around those tools may be a primary consideration. 5
- screening is, by nature, a large undertaking with many moving parts. Whatever tool is selected for this several individuals simultaneously. If this process is left up to the classroom teacher alone, conflicts opportunities, both synchronous and asynchronous, available with a good track record of creating whatever school wide screening tool is selected, so that these assessments can be carried out by undertaking, because the entire student population will be screened using this assessment, it is 3) Consider the purpose. School wide screening, interventions and progress monitoring may require different tools to maximize the effectiveness of each of these components. School wide idelity. Having everyone on the same page and speaking the same language is crucial when it imperative that it is relatively quick to administer. Ideally, many staff members can learn to use of time are likely to occur. Consider selecting a tool that has many professional development comes time to react to the resulting data.

staff you will be able to allocated to tier 2 and 3 interventions. Ensure that the selected intervention program can be student learning which is the sole aim RTI. Consider how many students your RTI model will serve and how many have a few different interventions ready to go in case individual or a group of students does not respond to initial administered within the allotted time and at frequency recommended by program developers. It is important to Selecting promising intervention tools is critical to the success of RTI. These tools will render improved interventions as intended. For schools whose staff members are already stretched there are several computer based intervention programs that may show positive effects on students learning. Again it is important to use evidence when selecting intervention tools.

professional development and time are available for staff members to administer assessments, gather PM can school teams collaboratively make decisions about student learning in response to PM data. It is this It is important that as leaders in the RTI implementation process, principals ensure that resources, data and collaboratively analyze it with regularity. Only by creating the time to analyze data, as a team, responsiveness that delineates the RTI model from traditional models of learning support.

entirely on the students and what the school community can do to create a plan to help each student reach meeting benchmarks. Data helps focus grade-level meetings on curriculum and instruction and away from PM data and graphs should be analyzed at grade-level/learning support meetings in order to help determine how interventions are working, and to help analyze progress of students who are not currently nterventions are not working, and provides direction for necessary tailoring of instructional strategies. peripheral concerns. Shore (2012) states that "These data meetings with teachers should be focused conchmarks" (p. 76). Reviewing PM data can help determine the effectiveness of interventions on individual students, and make necessary adjustments. This allows for faster augmentation when

Creating built-in collaborative time can be a perplexing task. School leaders need to think outside of earning creates strong relationships among school teams and can improve collegiality and school culture. support/grade level meetings. Pre-booking rotating substitute teachers to provide coverage, or dedicating many options that can be applied to create collaborative time. Work with your school team to determine the best course of action for your particular situation. Partnering with staff to focus on improving student the box when designing school timetables and allocating resources to free up teachers during learning a daily half hour of the entire school timetable to school wide intervention sessions are only two of the

The image to the right is of a very simple learner profile that can be used to make informed decisions about students receiving interventions. By linking a learner profile to each student's name on an electronic Pyramid of Interventions, data can be brought up quickly and effectively during grade level and learning support meetings. Many student information software programs can also house student progress monitoring data which can be linked to the Pyramid of Interventions.

| Smarty Pants | Area Of | Assessment | Intervention | |
|--------------|------------|-------------------|-------------------|-----------------|
| | Concern | | | |
| Sept 19/15 | Academic | Gr 1. Briggance- | Letter names | Small Group |
| | Speech and | 33(Cut score 60) | and sounds | Period 9 |
| | Language | 8/26 letter | | Mon. Wed. |
| | | names and 1/26 | | |
| | | letter sounds | | |
| DCT 2/15 | Academic | Upper Case | HWT chalk | In class |
| | Speech and | Letters name | boards, Mat man | support Periods |
| | Language | 14/26 | letters, magnetic | 2 and 3 Mon. |
| | | Upper case letter | letters | Wed. |
| | | sound 12/26 | | Small group |
| | | Lower case name | | Period 6 Mon |
| | | 15/26 | | Thur. |
| | | Lower case | | |
| | | sound 10/26 | | |
| oct 20/15 | Academic | Upper Case | HWT chalk | In class |
| | Speech and | Letters name | boards, Mat man | support Periods |
| | Language | 25/26 | letters, magnetic | 2 and 3 Mon. |
| | | Upper case letter | letters | Wed. |
| | | sound 21/26 | | Small group |
| | | Lower case name | | Period 6 Mon |
| | | 23/26 | | Thur |
| | | Lower case | | PAL Reader |
| | | sound 20/26 | | Period 7 |
| | | Dolch Words | | Tuesdays |
| | | 0V/CC 00 | | |

necessary to adjust instruction. Searle (2010) states that "according to the Four-Point Rule, if the four most recent to be as reactive as possible, researchers suggest several ways to augment interventions in order to elicit desired day and group membership. However, if a teacher or member of the learning support team deems an intervention achieved by changing or increasing intensity, duration and/or frequency of instruction, a change in setting, time of ineffective, then the intervention itself must be changed. "Any changes in the intervention need to be noted on the should be taken into consideration: increase time, reduce group size, increase the frequency of error corrections, methodological differences between the interventions can be easily monitored" (Brown-Chidsey & Steege, 2010, consecutive data points are below the goal line, a change in intervention should be considered" (p. 71). In order setting can alter student performance. Brown-Chidsey & Steege (2010) report that, desired results can often be results. Hall (2012) suggests that in response to inadequate rates of progress, the following recommendations When an intervention is not producing the needed progress for students to meet benchmark goals, it is or break tasks down. Burns & Kappenberg (2012) have found that something as non-intrusive as a change of graph with a vertical line. Even slight changes such as the length of sessions must be recorded so that the p. 110).

Leadership Strategy 6: Create Continuity

A major source of dissolution among Alberta teachers is the rapid pace that programs can take hold and description above. If teachers think that their effort will only be in vain, change leaders will not be able to foster Intrinsic motivation and autonomy even if school teams believe what you are doing is the right thing to do. You then, often before positive changes occur, the program is pushed aside in favor of new priorities and forgotten technology in a school will change, the structure of RTI itself is here to stay. RTI is not a program that can be must communicate with staff and form a commitment that although the assessments, literacy programs, and about. If you have been in public education for any length of time, you can name a few examples that fit the purchased; it is a way of doing business.

the learning support team should reduce or discontinue the intervention. However, it may be useful to monitor identifying when students are ready to return to Tier 1 (core instruction) and discontinuing interventions must exhibits three data points that meet or exceed the benchmarks for that particular grade and time of year then criteria for determining a so-called 'exit strategy'. According to Brown-Chidsey & Steege (2010), if a student student progress for a period of one month to ensure that they do not regress after being exited from Tier 2 be predetermined and structured with deliberate care. Many researchers suggest a clearly defined set of successfully achieved a level of progress that indicates they no longer need intervention. The process of Responsiveness to progress monitoring also works to notify team members when students have intervention groups.

present. That is because alignment between what you are doing and why you became an educator in the first interventions, based on student performance, a strong sense of accomplishment will be felt among those When you are part of a group of educators that collaboratively makes the decision to discontinue place will be established.

Leadership Strategy 6: Create Continuity

community" (Edmonton Regional Learning Consortium, 2014). By ensuring that all staff members feel a sense of something that can withstand the constant shifting context of today's schools is a challenge that needs to be met If your school's RTI model is implemented with a clearly shared vision, is built in collaboration with staff members, and school leaders create the conditions for it to be successful, it will not fade into obscurity like so divisional leadership, staff turnover and changes in political policies that can affect school pedagogy. Building many other school improvement initiatives have done in the past. "For change to be sustainable, leadership must extend beyond the school principal and become a shared responsibility involving school staff and the ownership and commitment to your school's RTI program, it will be more resistant to changes in school or head on through collaboration and shared responsibility.

Conclusion

ensuring that kids who need help will receive it in a timely manner; it is the right struggling kids. Remember that RTI is not a program that can be purchased; it RTI, when implemented correctly, is intuitive, makes sense, and helps is not a fad, trend, or the latest band wagon to jump on. RTI is a system of thing to do.

interventions, progress monitoring and responsiveness work together to create The four essential components of RTI: school-wide screening, tiered a system that helps ensure that every student is provided with their best chance at success.

create continuity, you can effect change to implement school improvement that will benefit your students and endure the shifting context of public education. conditions to foster change, model the way forward, foster motivation and If you do a good job of communicating this with your staff, influence