

Implementing Principles of the Response To Intervention Model: One school's application of the model

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Abstract

A current model for the early identification of students with academic struggles that is recognized by the Saskatchewan Ministry of Education is that of Response to Intervention (RTI). While the Ministry espouses the use of RTI, it does not mandate its application, nor identify which principles of the model are considered most effective.

I conducted a qualitative, instrumental case study involving one rural school identified by the school division as effectively applying the principles of RTI. Using a semi-structured interviewing technique, and working with three participants, I identified which of the RTI principles the school believes to be effective, how the school implemented these principles, and the factors and conditions that contributed to their implementation. Along with interviews, documents collected from the school and school division that pertain to the application of RTI principles were analyzed. Finally, a narrative description of the research was completed.

In total, ten themes were identified and further differentiated into four categories. The categories and corresponding themes are:

- 1) Attributes of the model that are considered critical: tiered intervention, assessment practices and division based supports.
- 2) Implementation strategies used: professional development, access to resources, and support provided when needed.
- 3) District and school factors that contribute to effectiveness of model: student and staff engagement and staff teaching philosophy.

- 4) Extraneous factors that contribute to the effective implementation: staffing and time.

The implications of these findings are that effective implementation and maintenance of RTI principles requires careful planning, communication and a team approach. The principles of the model must be a priority for all staff involved in whatever capacity they contribute.

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Dedication

For my parents: the best cheerleaders I know!

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CHAPTER ONE

INTRODUCTION

Chapter Synopsis

The purpose of this first chapter is to provide a brief overview of the research conducted to date, in the area of Response to Intervention implementation (RTI), and to explain the purposes of the current research study. The chapter begins with a short introduction to the RTI model as it pertains to the identification of students with special learning needs, as well as some of the limitations and shortcomings of the previous research in this area. The chapter continues with a section describing models previously used in Saskatchewan for identifying students with special learning needs, as well as some information regarding program implementation. Next, the guiding research questions are presented. Finally, the chapter ends with some necessary definitions for reading and understanding this research study.

Introduction and Purpose

The Ministry of Education promotes the multi-tiered Response to Intervention (RTI) process, which provides a continuum of services, supports, and interventions to students requiring additional assistance (Saskatchewan Learning, 2003). This is a relatively new process, which requires additional and ongoing professional development and team coordination in order to effectively implement it. As members of this team, Saskatchewan psychologists use their core areas of competency to assist school divisions in implementing RTI procedures (Saskatchewan Ministry of Education, 2008). Prior to

the implementation of the RTI model in the early 2000s, the achievement/ability discrepancy model was the primary mode of identifying students in need of additional supports (Berkley, Bender, Peaster, & Saunders, 2009). This model relied upon determining the difference between the student's intelligence quotient (IQ) and their achievement scores. As each province/state was responsible for determining its own regulations regarding the significance of the discrepancy, a great deal of variability existed from place to place. As well, students who may be struggling often went unidentified until their academic performance had declined to such a point that the province/state determined it to be significant, causing that student to fall even further behind. Some felt that this promoted a *wait to fail attitude*, which combined with the narrow spectrum of information provided by the assessment process, did not explicitly assist students and educators in understanding the nature of that individual's challenges (Berkley, Bender, Peaster and Sauders, 2009). In this model, only those students with a large discrepancy between their ability and achievement scores were eligible for intensive supports. This model largely ignores low achievers, as they do not qualify for additional supports.

Research has shown that principles of the RTI model, when implemented properly and in a school wide manner, can provide significant improvement in the process of identifying and providing intervention for learners who may be struggling (Berkley, Bender, Peaster, & Saunders, 2009, p. 86). It appears that when there is no cohesive and collective understanding of the model and/or the principles it represents, it fails. A brief examination of the tiered intervention models as represented on the websites of four Saskatchewan school divisions identified that each division is applying aspects of

the model: examples are utilizing three levels of intervention, co-teaching, whole group instruction, small group instruction in class or out of class, individual instruction and pre-referral interventions. However, the application varies. For example, one division applies the principles across the curriculum, while another has chosen to focus on applying the principles to a reading specific program. One school division identifies RTI specifically, while others use broader terms, such as problem solving and tiered instruction.

The Response to Intervention model does not denote a specific set of procedures. Instead it promotes specific criteria for decision-making in regard to identifying students with special needs and differentiation of instruction and supports (Christ, Burns, & Ysseldyke, 2005). As such, the methods used for implementation may vary from division to division, or even from school to school. This leaves room for success, as well as struggles. In my experience as a teacher and in discussion with other teachers, many Saskatchewan schools are utilizing this model, and personnel describe mixed results.

According to Fuchs and Deschler (2007), equally as important to understanding the principles of RTI is understanding the conditions, or contextual factors, in the school or district in which RTI was successfully implemented. Educational innovations like RTI gain most traction in settings that provide the necessary conditions to support their use. Less successful implementations elsewhere may be caused by an absence of supporting conditions, rather than due to the particular RTI principles utilized. To date, little qualitative research has been conducted regarding the selection, implementation and maintenance of the principles of RTI in Saskatchewan schools. In fact, national and international research on the topic of RTI identifies this lack of a research base as an area

requiring future study and consideration (Burns, Appleton & Stehouwer, 2005; Danielson, Doolittle & Bradley, 2007).

In Canada, it is much more common to find quantitative research that provides analysis of RTI effectiveness strictly by improved student academic outcomes; and even then, this research has mostly been conducted in British Columbia and Ontario (McIntosh, MacKay, Andreou, Brown, Mathews, Gietz, & Bennett, 2011). My research focused on obtaining a more detailed and in-depth perspective of what makes the principles of RTI effective. As the research took place in a rural school that is similar in size and demographics to many schools across Saskatchewan, it also provides insight into some of the challenges a rural setting presents, such as availability of resources and support staff.

RTI differs from the achievement/ability discrepancy model in that its primary purpose is to maximize learning for all students by providing school wide and class wide instruction that supports the majority of students (Vaughn, Linan-Thompson, & Hickman, 2003). This model emphasizes evidence-based practices within general education which can improve outcomes for more students and reduce the number of students requiring additional supports. Further, the principles of RTI promote school wide screening for identifying student progress towards valued outcomes and progress monitoring of students who are not yet meeting these outcomes (McIntosh, et al., 2011). Based on the screening process and regular progress monitoring for struggling students, educators may then go on to provide a continuum of supports to students through what is most commonly three tiers of intervention (Hale, Kaufman, Naglieri, & Kavale, 2006). While research shows that RTI provides effective interventions for struggling learners, it

must be implemented consistently and school-wide. Thus, it is the implementation of the principles of the model that determines its effectiveness. The principles of the model are the standards upon which the model is based. The essential principles of RTI include universal screening, tiered instruction, research-based instruction, continuous progress monitoring, data-based decision making and problem solving (Saskatchewan Ministry of Education, 2008). I explored how one school successfully implemented principles of the RTI model and which aspects of the model the participants perceive as critical to this implementation. During the interview process, I heard what processes they utilized for training, implementation and continuity, as well as what strategies they have undertaken to ensure the continued effectiveness of the principles. I also heard about the teachers' experiences with the process of implementing the principles of the RTI model and how this has shaped their current teaching practices. As well, I investigated what principles of the model school staff chose to focus on, and why they felt these principles best serve their school.

Guiding Questions

- 1) What factors and conditions do school personnel identify as contributing to the effective implementation of the principles of the Response to Intervention model?
- 2) What components of the model do school personnel identify as being effective and key in their implementation of the principles of the Response to Intervention model?

Rationale

In examining a school that has effectively implemented the principles of RTI, I can share their strategies with other schools that may wish to employ a similar model. Effective implementation will improve the quality of education and support services that students who are struggling receive. It may reduce the amount of time students require program adaptations or modifications to meet their learning needs, and may benefit the students by allowing them to receive targeted instruction in the areas in which they are experiencing challenges. Understanding which principles of RTI the participating school values most, and how they have implemented and maintained these principles may also inform how other professionals such as psychologists, speech and language pathologists and occupational therapists who work within the school system, provide supports. Parents may also learn how they can best support their children should they encounter challenges over the course of their educational careers. As well, they can be confident that their child's progress is being monitored and their needs are being met before they get to the point of failure. In fact, all students, families, educators, and professionals working within the education system stand to benefit from effective implementation of the RTI model.

To explore my research questions, I utilized a qualitative, instrumental case study (Creswell, 2003). In exploring these questions I also considered the factors that research has identified as contributing to the effective implementation of educational programs, including professional development, program implementation and in this case, identification of students with exceptionalities (Durlak and DuPre, 2008; Fullan, 1983;

2001; Garet, Porter, Desimone, Berman & Yoon, 2001). How schools go about developing an understanding of these factors has implications for student learning in general, and will certainly impact the effectiveness of RTI implementation. By developing understanding in these areas, I hoped to gain insight into the means by which the participating school was able to effectively apply the principles of the RTI model.

Researcher Position

Over the past seven years, I have taught grades kindergarten to nine in both a small rural setting and a larger urban setting. I have also undergone an eight-month practicum, working under supervision, conducting educational assessments and consultation across eight schools and since then, have been employed in the same capacity for five months. Since beginning my teaching career, regular classroom supports decreased and classroom numbers increased in my experience, making it more difficult to meet the needs of all students (Ministry of Education, 2010). I have taught in three separate schools that have participated in implementing the RTI model in varying ways with varying results. For example, in one school, the special education resource teacher received limited professional development and was expected to share understanding with teaching staff, implement the program and monitor effectiveness. There was little explanation of the program to teaching staff, and very little consistency across the grades in the areas of assessment, supports and record keeping. The special education resource teacher provided almost no in-class support for struggling students, and most programming was delivered outside of the regular classroom. Teachers implemented their own in-class and small group programs as needed. Accessing the

support of occupational therapists, speech and language supports and/or a registered psychologist was done via the special education resource teacher, and could be challenging. In another school, the special education resource teachers received similar training, yet provided much more in-class and small group programming. In this school, the RTI programming was initiated by the administration and has since been led by the special education resource teachers, although they state that no formal professional development has ever been obtained. Together, the administration and special education resource teacher team decided to focus much of their RTI implementation in the subject area of mathematics from grades three to five. There is also a teacher in the school who is designated for assisting in the differentiation of instruction within the classroom. This could be classified as a tier one intervention.

As a psychologist, I will depend on the principles of the RTI model and I will be involved in its implementation. This is the driving force of my research. I'd like to be able to confidently describe the effective implementation of the principles of RTI so that other schools in my division may take ideas and begin discussions about how to implement RTI themselves. I would also like to gain insight into those ways that I may be most of service to the schools I serve and their student populations. Having recently completed an eight-month practicum working with a school psychology team and other support staff, I've observed schools in which many principles of RTI are being utilized. However, I also observed the frustration that many teachers were feeling in the application of these principles and the means by which they are able to access the support of the psychology team. Many of the schools that I was involved with are under the impression that the only way to access the support and recommendations of the

psychologist, speech and language pathologist or occupational therapist is via a formal assessment, rather than making use of consultation services. My experience as a member of the learning support staff has shown me that, while the model of service delivery for struggling students is evolving, there is no clear path towards a more efficient and collaborative approach. Ideally, this research will clarify some aspects of the role of a psychologist and identify additional ways in which they can be supportive to students.

I am also aware of my experiences with professional development as a teacher, some informative and some less helpful. As implementation of the model requires considerable and ongoing professional development, I am interested in how schools can best use their time and available funding to improve the delivery of services to students. Often professional development opportunities seem far removed from the classroom and little change or enlightenment occurs. I am interested in hearing about one school's effective use of professional development and perhaps applying this understanding to future professional development within the school division.

Definitions

- **Response to Intervention (RTI)** is a program that integrates assessment and intervention within a multi-level prevention system to maximize student achievement and reduce behavior problems. With RTI, schools identify students at risk for poor learning outcomes, monitor student progress, provide evidence-based interventions and adjust the intensity and nature of those interventions

(tiered model of service delivery) depending on a student's responsiveness
(*National Center on Response To Intervention, 2012*).

- **RTI Tier 1** constitutes general education and is considered a prevention tier used for core skill interventions provided in a class wide model. It makes use of universal screening practices and is delivered by the classroom teacher who may consult with administration, the special education teacher, occupational therapists, speech and language pathologists and psychologists (Fletcher, J. & Vaughn, S., 2009).
- **RTI Tier 2** utilizes small group, research based interventions with careful progress monitoring in addition to the primary instruction being received by all students in tier one. This is generally provided by the classroom teacher or a special education teacher (Masteropieri, M., & Scruggs, T., 2005).
- **RTI Tier 3** includes the most intensive, individualized intervention and instruction, as well as frequent progress monitoring (Berkely, Bender, Peaster, & Sauders, 2009). It is generally provided by the special education teacher in consultation with learning support staff such as speech and language pathologists, occupational therapists and psychologists, and may or may not include psychoeducational assessment. (McIntosh, et al., 2011).
- **Learning Disability** is a disorder that “may affect the acquisition, organization, retention, understanding or use of verbal or nonverbal information. These disorders affect learning in individuals who otherwise demonstrate at least average abilities essential for thinking and/or reasoning” (The Learning Disabilities Association of Canada, 2002).

- **Instrumental Case Study** is defined as an in-depth examination of a single entity as it pertains to a specific theme or issue, with the focus on acquiring a deep understanding of the entity, issue or theme (McMillan & Schumacher, 2010).
- **Constructivism** is a qualitative approach to research based upon the belief that individuals seek understanding of the world in which they live and work, and that meaning is based upon their interactions with the world. (Creswell, 2009).

Thesis Organization

This chapter is followed by a thorough literature review, which provides the reader with a more comprehensive summary of the research that has been conducted in the area of RTI on an international, national and local scale; program implementation and professional development; and the identification of students with special learning needs. A Methodology chapter that describes the research methods this study employed follows the Literature Review chapter. Next, a Results chapter details the findings of this study. The final Discussion chapter focuses on an interpretation of the results of the study in the context of the current research literature, and considers the implications of the findings.

CHAPTER TWO

REVIEW OF RELEVANT LITERATURE

Chapter Synopsis

This chapter provides the reader with a thorough review of the literature in the field of RTI internationally, nationally and locally and explains why it is a relevant model for identifying students with special learning needs. It also provides a review of literature on the topics of program implementation and professional development, and other methods of identifying students with special learning needs. The chapter begins with an overview of the history of RTI on an international scale and the research conducted abroad. Next, it discusses the history of RTI in Canada, as well as a review of some of the research initiatives that have been published. Following this is a review of the literature regarding RTI at the provincial level and an overview of the literature concerning the relevancy of RTI within the school system. Included is a review of literature regarding professional development and program implementation. The chapter concludes with a summary of the literature regarding other methods of identifying students with special learning needs. Throughout, observed gaps in the research literature and the purpose of the current study are inserted and elaborated upon.

The Response to Intervention Model

Internationally

The components of the RTI model have been represented under several titles in the United States over the last two to three decades: *Failure to Respond to Treatment*, *Response to Treatment*, and *Response to Intervention* just to name a few (Graner, Faggella-Luby, & Fritschmann, 2005). However, the model was developed in response to growing concerns around the definition and identification of students with a learning disability (LD), particularly the continued dissatisfaction with the IQ-achievement discrepancy model and with the over-identification of students with LD during a period of time from 1975 to 2003 (Graner et al., 2005). Additionally, the reauthorization of the Individuals with Disabilities Education Act (IDEA) in 2004 coined the term *Response to Intervention* and made the use of RTI an acceptable and alternative means to identifying students with learning disabilities. While not mandated by law, each of the United States are now authorized to decide if there is a more efficient, effective and valid method of identifying a learning disability. Since then, many states have begun moving towards the implementation of some form of RTI (Berkley et al, 2009). It is in the United States that the RTI model gained popularity and notoriety and it is also there that the selection and application of key components of the model began (Mastropieri & Scruggs, 2005). However, while each state is free to choose which aspects of the RTI model they implement, rarely does the research identify these aspects nor does it explain why and how they have been effectively implemented. As well, there is little qualitative research

available regarding the issues involved in RTI implementation. A 2007 study by Danielson, Doolittle and Bradley identified the following needs regarding RTI implementation: a) professional development and high quality training materials regarding primary and secondary tier interventions and the assessments needed for screening and progress monitoring as well as training for staff involved in the delivery of intensive, individualized interventions; b) building capacity amongst staff regarding evidenced based implementation strategies to ensure practices are sustained and are implemented with fidelity. Their study also identified that further research is needed in the areas of evidence based practices, progress monitoring and assessment and implementation fidelity of all these areas.

A second study by Greenfield, Rinaldi, Proctor and Cardarelli (2010), qualitatively examined how educators viewed the reform effort in implementing RTI principles within their kindergarten to grade five school. Similar to the participating school in this study, Greenfield et al.'s study targeted a school using the principles of RTI within a cross-grade reading program. The teachers' overall perceptions were presented using a thematic approach and five themes were identified: 1) assessment and progress monitoring, 2) the link between intervention and instruction, 3) impact on teacher practice, 4) culture of reform, and 5) special education referral processes for English Language Learner students. Teachers reported that they used student data as a way to measure and document students' academic progress and that post RTI principle implementation, they were much more strategic in their assessment and progress monitoring practices. As a result, the students' data helped increase student achievement. The results of this study also indicated that through the use of students' data, teachers

were better able to provide targeted instruction and to utilize progress monitoring as a measure of the effectiveness of instruction. Teachers reported that implementation of RTI principles clarified when to refer students for special education eligibility. They also cited needing more time to process and understand the data, intervention practices and the reform effort itself. Finally, the participating teachers identified feeling like stakeholders as a positive aspect of implementing RTI principles within their school. They felt as though being a stakeholder allowed them to share goals with their colleagues, as well as their students.

Variations of the model.

In exploring the effective implementation of the principles of the RTI model, one must first be familiar with the process, and the modifications, adaptations and purposes it serves. “RTI refers to any set of activities designed to evaluate the effect of instruction, or intervention, on student achievement” (Christ, Burns, & Ysseldyke, 2005, p. 6). It can be described as a series of student-centered assessment models and the use of problem-solving and research-based interventions for identifying and addressing the learning needs of students (Berkley et al., 2009, p. 86). At its core, RTI requires high-quality classroom instruction, universal screening, continuous program monitoring, and the use of research-based and consistent interventions to support students in need. However, a school or school system may choose to give more weight to one or two of these components than the others.

Currently there are two commonly recognized models of RTI in the literature: the problem solving model, and the standard protocol. The problem solving model addresses

a student's deficits at an individual level by implementing research-based intervention tailored for that student's specific needs. A student's support team consisting of parents, teacher, psychologists and administrators, follows a four step process of a) defining the problem, b) designing an intervention, c) intervention implementation and d) evaluating the student's progress (Berkley et al., 2009; Fuchs & Fuchs, 2003). With the standard protocol model of RTI, a standard set of empirically instructional approaches is implemented to prevent and remediate academic problems. These supports are put in place with minimal analysis of the deficit skill area (Christ, Burns, & Ysseldyke, 2005). Implementation involves trials of fixed duration delivered either in small groups or individually. Should a student respond to the treatment trial, they are seen as responding to intervention and deemed free of a disability. They are then returned to their regular classroom. If they do not respond, they progress to the tier two standard treatment. If they show insufficient progress following tier two, a disability is suspected and the student is referred for further evaluation (Fuchs & Fuchs, 2006). According to Fuchs and Fuchs, a potential shortcoming of the problem solving method is that it requires that educators be proficient in a wide variety of assessment and intervention techniques, whereas the standard treatment protocol requires that educators master only one protocol. However, the problem solving method allows for a more individualized intervention as well as greater collaboration amongst the school team. Fuchs and Fuchs (2006) go on to state that "the comparative fidelity of implementation (and effectiveness) of the two approaches has not been explored within the same experimental design" (p. 96) and represents an important area of future research.

Another variation of the process is the number of tiers used in designing and implementing interventions for students in need. Typically, the model has included three tiers of intervention with the first tier being whole-group, classroom-based interventions; the second involving small-group instruction targeting a specific skill set or challenge; and the third being the most intensive form of intervention, typically individually delivered, very closely monitored, and regularly re-assessed (Berkley et al., 2009). In implementing the model, some schools have utilized only two tiers while others have gone to as many as four (Fuchs & Fuchs, 2006). This study will identify how many tiers the participating school believes to be effective, and the level of intervention provided at each tier. Knowing what practices are identified as effective may guide schools in initially implementing the program, or improving their implementation should they be struggling with the model.

Nationally

Canada, too, has seen dissatisfaction in the traditional models of identifying students with special learning needs and/or learning disabilities and by which services are provided. Like the United States, Canadian educators have traditionally been dependent upon cognitive assessment and the ability-achievement discrepancy (Kavale & Forness, 2000; Sternberg & Grinorenko, 2002). This dissatisfaction, alongside an increasingly culturally diverse population and concern over an “all or nothing” approach, has led to the adoption and implementation of the principles of the RTI model (McIntosh, MacKay, Anderou, Brown, Mathews, Gietz, & Bennett, 2011). Also, as in the United States, the information available and consistency of the RTI model varies from province to province

(Kemp-Koo & Claypool, 2011). Perhaps this is rightly so; Canada is a vastly diverse country and the principles of the RTI model that are most effective in one geographical location may not prove to be equally as effective in another. What this research seeks to do is to begin a conversation, on a small scale, regarding one rural school division's application of the principles of RTI. From there the conversation can expand to a provincial and, perhaps, even national level improving the continuity, consistency and effectiveness of how we implement RTI and why we choose to focus on the principles we do.

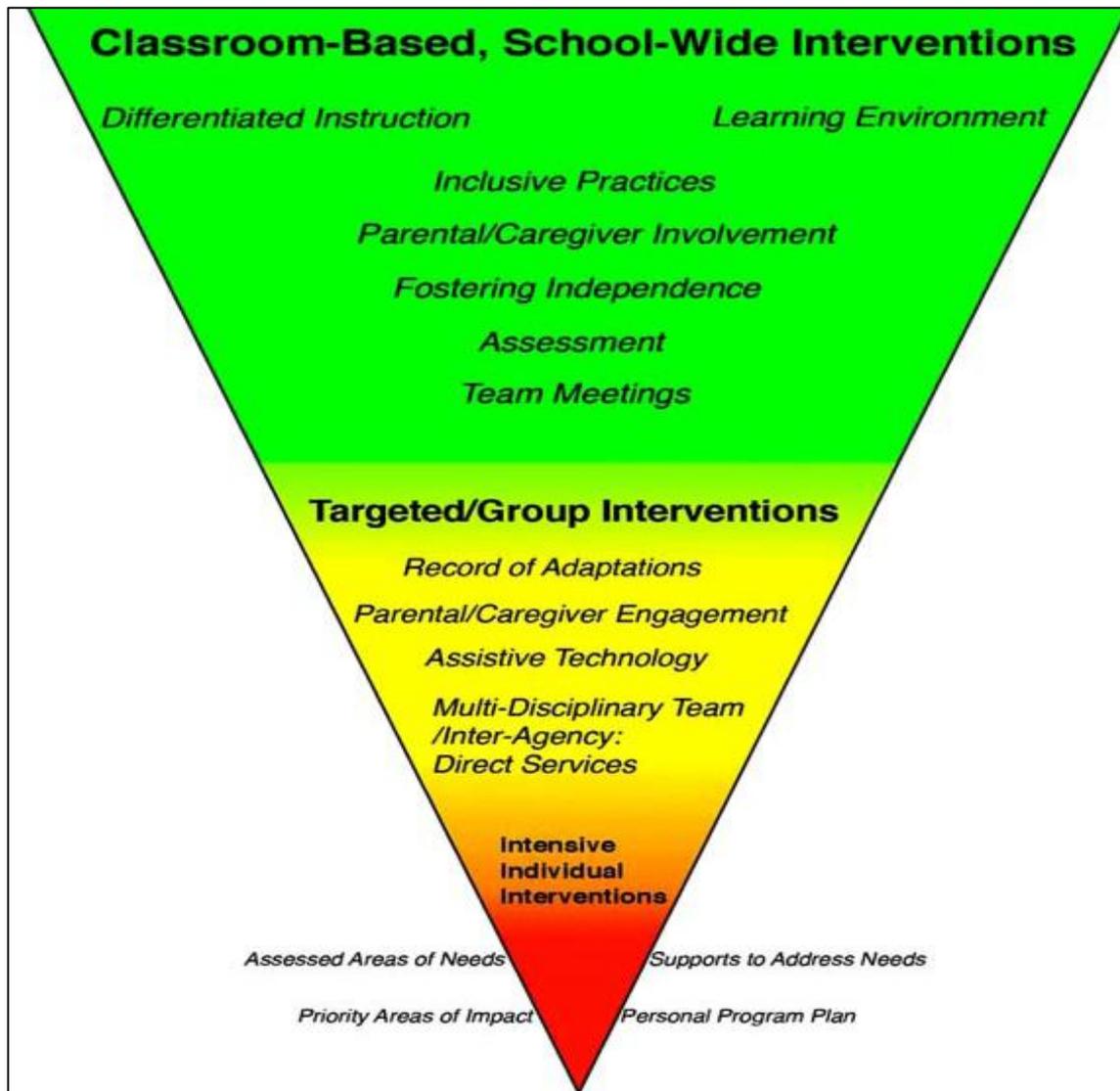
RTI is a collaborative, team-based approach to improving learning outcomes. It attempts to align the interests of teachers, support staff, administrators and psychologists (McIntosh et al., 2011; Fuchs, Mock, Morgan, & Young, 2003). Canada encompasses 9 984 670 square kilometers (National Resources Canada, 2012) with a population of just 34 576 074 (Statistics Canada, 2012). That's just one person for every 0.25 square kilometers. With that kind of geographical separation, especially in rural or remote areas, it is crucial to develop a team approach to the identification of and intervention for students with LD and/or special learning needs. A system that depends upon the expertise of one very small population of people (in this case, psychologists) is inadequate to meet the needs of the greater population. RTI promotes a broad spectrum of services and supports from the psychologist including but not limited to, implementing prevention programs, designing school-wide interventions and providing on-going support to school staff. This allows them to support the needs of more students by helping to implement programs meant to decrease the number of students who might otherwise require more intensive intervention (McIntosh et al., 2011, 34). Working from

a school psychology perspective, this study will provide insight into the effective application of RTI principles which may then serve to inform and strengthen the collaboration amongst school teams.

Provincially

While the RTI model is reputed to have been pioneered in the United States, a strikingly similar three-tiered approach has been used in Saskatchewan schools since the 1970s. The Saskatoon Region Special Services Project was a cooperative effort to implement the Standards for Educators of Exceptional Children in Canada (SEECC) model, which focused on a special education service delivery for rural areas through regular classroom and resource teachers rather than extensive use of consultants and special classes. Like a traditional RTI model, this service delivery model was also based upon three tiers. Sanche (1976) describes a model that provides delivery of service in community schools through basic training for diagnostic teaching of marginally exceptional children for all regular classroom teachers, placement of one resource teacher in each school to work with marginally disabled children and their regular teachers, and providing in-depth educational diagnoses and remediation for more severely disabled students via purchased or shared clinical resources. Currently, the Saskatchewan Ministry of Education promotes a three-tiered version of the Response to Intervention model as is represented in Figure 1.1.

Figure 2.1 Saskatchewan's three-tiered model of service delivery (2009)



This model is based upon individual needs, rather than a strict diagnostic approach. The current version has been in place since 2008 when the *Guidelines for the Practice of Professional Psychology in Schools within Saskatchewan* mandated that Saskatchewan

psychologists will “use their core competencies (e.g., research, assessment, consultation) to assist school divisions in implementing RTI procedures (p. 3).

The *Guidelines for the Practice of Professional Psychology in Schools within Saskatchewan* also suggests that an ideal ratio of psychologists to students would be 1:1000 (2008). The participating school division in this study had an estimated student population of approximately 9,600 students and four psychologists. The strain on the psychologist can be especially strong in a rural setting where “. . . filling and maintaining psychologist positions is difficult and where the geographical service areas are very large” (Kemp-Koo & Claypool, 2011, para. 13). In an RTI model, the psychologist focuses on services that support a broader range of students and on providing ongoing support to staff through data-based decision making and progress monitoring. This would allow the psychologist to support the needs of more students by helping to implement programs that decrease the number of students who would otherwise require more intensive assessment and intervention (McIntosh et al., 2011). This study aims to provide valuable information about how a psychologist can best support the schools in their school division via the principles of RTI. It also aims to provide focus and clarity about the psychologist’s role in the participating school. This insight may be used to inform the psychologist’s practice throughout the school division and hopefully “news of the successful implementation of RTI in one area of the province will inevitably spread to other school divisions because of extensive networking and relatively small populations” (Kemp-Koo & Claypool, 2011, para 14).

Why Response to Intervention?

Besides the fact that the current provincial Ministry of Education espouses the value of RTI, there is other evidence that RTI is an effective model for the delivery of services and identification of students requiring additional supports. Much of the empirical evidence provided in support of RTI has to do with improved literacy outcomes. A 2006 study by McIntosh and colleagues found that with a comprehensive RTI approach, 90% of students in the district ($N = 1,653$) were competent readers by the end of Grade 3, in contrast to only 60% ($N = 12,500$) of students in a national normative group (McIntosh, Chard, et al. 2006). Other recent research has indicated that RTI in reading skills corresponds to “marked and enduring changes in brain activity” (McIntosh et al., 2011, p. 26). A leading researcher, Simos, and his colleagues have demonstrated across multiple studies that intensive RTI evidence-based interventions show significant effects on neural functioning when comparing pre and post intervention neural imaging. The post intervention brain shows evidence of reorganization in brain activity to more closely resemble the brain of a typically functioning control subject. Further to this, the benefits carry on one year after intervention and continue to normalize even after the intervention has been withdrawn (Simos et al., 2002, 2007).

While little research has been conducted in Saskatchewan regarding the effectiveness of the principles of RTI, several school districts in British Columbia have provided evidence of its success. One such district implemented a RTI system targeting early literacy in 2006. Approximately 850 students in the Fort Nelson School District were tracked over a four year period. Student literacy scores increased in each of those four years following implementation, despite Fort Nelson School District ranking in the top five most vulnerable districts in the province for social competence and emotional

maturity. Scores on a Grade four provincial reading comprehension assessment were far above the provincial average for all students, with 92% meeting or exceeding expectations, compared to 62% provincially (McIntosh et al., 2011).

A second study conducted in Catholic Independent Schools of the Vancouver Archdiocese (CISVA) revealed steady improvements in reading performance since implementing RTI principles in 2007. Their 2009-2010 student outcomes indicated that 86% of students were able to be supported adequately with tier one level supports, compared to the normative sample of 60%; 12% of students in the participating school required tier two level supports versus 24% of the normative sample; and 2% of participating students required tier three level supports versus 16% of the normative sample. The percentage of students requiring support beyond tier one is markedly smaller, which not only frees up resources and time for students at the tier two and three levels, but also allows more students to be successful (McIntosh et al., 2011).

Almost all of the research I was able to find that provides evidence of the usefulness of RTI is quantitative and based upon standardized measures of reading and math. Such studies do little to describe the experiences with the principles of RTI that school staff, students and parents may report. As such, little insight into development and implementation of the principles is provided. Statistics alone are not enough to implement a model such as RTI. This research seeks to begin a more in-depth, descriptive and qualitative study of implementation of the principles of RTI, narrowing the gap in the research that currently exists.

Professional Development and Program Implementation

The effectiveness of any program implementation within a school relies very heavily upon the means by which the staff develops understanding and changes to instructional practice. As such, professional development is a critical component of effective implementation. Recent studies have highlighted the fact that effective professional development depends on several factors: duration, how the professional development is presented (workshops, study groups, college courses, etc.), and the collective participation of teachers within a school (Garet et al., 2001; Porter, Garet, Desimone, & Birman, 2003). Other research specifies that explicit focus on subject matter during professional development contributes to providing teachers with a rich and flexible understanding of the subject area (Burko, 2004). This deep understanding serves to not only engage teachers in the development of their professional skills, but may go on to improve student learning.

Professional development is but one aspect of effective program implementation. Michael Fullan (1983) stated that the degree to which a program is effectively implemented is affected by four variables: attributes or characteristics of the model, implementation strategies, district and school factors, and extraneous factors. Fullan's variables are widely accepted and are consistent with a large body of research regarding program implementation. Fullan's work, along with eighty other reports was included in a 2008 meta-analysis of the factors that affect program implementation. This review indicated that the process of program implementation is affected by variables related to communities, providers and innovations, and aspects of the prevention delivery system (i.e., organizational functioning) and the prevention support system (i.e., training and technical assistance). As well, the review indicated that the collection of implementation

data is an essential feature of program evaluations, and more information is needed on which and how various factors influence implementation in different community settings (Durlak & Dupre, 2008). Each of these factors is consistent with Fullan's four variables affecting program implementation and serves to further cement their relevancy in the application of the principles of RTI in the participating school.

Identification of Students with Special Needs

While RTI is an example of one current and effective model of identifying and intervening on behalf of students with special needs, it is not the only model. The process of identifying special needs in students is not new, and many strategies have been utilized in the past, with varying results. In fact, across Canada there is no single initiative, like we now see beginning in the United States. Instead, each province or territory controls how students receive special education services including financing, curriculum development and delivery of special education programs. For example, Alberta Education began an initiative called *Setting the Direction* in 2009 which encompasses four critical features of the RTI approach: an emphasis on evidence-based practice, providing a continuum of support for all students, use of progress monitoring data to identify student success and a systems-level approach to building capacity for effective support (Alberta Education). Also beginning in 2009, the Ontario Ministry of Education began promoting initiatives that are highly focused on improving teacher capacity, building collaborative relationships with communities and other government partners involved and looking at broader measures of measuring achievement and learning to place more emphasis on a whole student approach (Ministry of Education).

Similarities across the country include the use of individual education plans (IEPs), a collaborative and team centered approach to problem solving and an emphasis on inclusion (Dworet & Bennett, 2002, p. 22). In Saskatchewan, the identification of and programming for exceptionalities is dependent upon the collection of demographic data, a statement of educational concerns, any available educational assessment data (both standardized and non-standardized) and any subsequent recommendations, followed by review procedures. This information is then combined to develop an individualized program that outlines essential supports and is based on the actualization of the *Needs-Based Service Delivery Model*. This model is based on three key principles: a) inclusionary philosophies and beliefs, b) intervention planning, and c) inter-professional collaboration (Ministry of Education, 2011).

Summary

While the literature espouses the usefulness of RTI in identifying and intervening for students with both LD and other learning challenges, little information has been collected about which principles of the model schools find most useful and effective. In addition to this, the research that provides evidence of the usefulness of RTI is almost entirely quantitative in nature. As previously stated, such studies do little to inform the implementation and development of the principles of RTI in a school division or school. This study examines one school's experiences with the model and determines what components they deem as critical and how those components have been successfully implemented. It also serves to provide information to the school psychology team in the school division regarding their role in the support of school staff and student learning. In

conducting this research I also examine the role that professional development plays in the implementation of the principles of RTI and to what extent these principles agree with the more traditional strategies for identifying struggling learners in Saskatchewan.

CHAPTER THREE

METHODOLOGY

Chapter Synopsis

This chapter outlines the details of this study, including the underlying assumptions, information regarding the research participants, the research methods employed, and the means by which data was collected and analyzed. A section discussing issues of trustworthiness and ethical considerations concludes the chapter.

Assumptions

As this project is dependent upon the teachers' experiences and understanding of the principles of the Response to Intervention model, this study falls within the

constructivist paradigm (McMillan & Schumacher, 2011). “The constructivist researcher tends to rely upon participants’ views of the situation being studied” (Creswell, 2003, p. 8). Together with the participating teachers I examined the beliefs that teachers share regarding Response to Intervention, and what they experience as effective strategies and skills for implementation of the model. The participating teachers’ understanding of the Response to Intervention model has been created through their relationships with their school administrators, special education teachers and each other. Each teacher adds his/her own unique experiences with Response to Intervention to their personal perceptions and the collective understanding. A constructionist study indicates that knowledge is constructed out of an individual’s subjective views or understanding about the world/reality (Caelli, Ray, & Mill, 2003). In combining their personal understanding, the teachers at the participating school have created a collective understanding and used it to effectively implement the model. In exploring their understanding, I remained sensitive to the fact that the data gathered is context specific, and that there is no “ultimate truth” (Marshall & Rossman, 2011, p. 60) to be learned. Under the constructivist paradigm it was also important that I position myself within the research, and recognize the influence that my own experiences and background have had on my interpretation. I have learned about the qualities the individuals at one school possess that allow them to effectively implement the principles of the Response to Intervention model, what supports them in implementing these components, and how they view those supports as being effective.

Methodology and Methods

Because this research examines the teachers' assumptions and worldviews about learning, the study applied a qualitative design. For the purpose of this study I conducted an instrumental case study as my methodology. I chose this methodology so I could focus on exploring a specific topic within a bounded system of individuals (Creswell, 2002, p. 485). The school acts as a bounded system in that it is unique according to place, time and particular characteristics (McMillan & Schumacher, 2010). An instrumental case study is an ideal methodology as these case studies are intended to provide detailed, specific accounts of particular circumstances, rather than offering broad, generalizable findings. In an instrumental case study, the researcher focuses on a single issue or concern and then selects one bounded case to illustrate this issue (Creswell, 2007). As well, a case study was selected as there is ample evidence that it is a suitable means by which to explore effective program implementation, and even more specifically, effective RTI model implementation (Fuchs, Mock, Morgan & Young, 2003; Hale, Kaufman, Naglieri & Kavale, 2006; Creswell, 2001).

Selection of case

A school identified as having implemented principles of the RTI model was selected from the division for which I work on a reputational basis. The decision to work within this division was influenced by my role as first a teacher and eventually a psychologist for this division. The sampling in this instance can be considered both snowball and criterion based as the participating school was selected via suggestions made by itinerant staff who worked in a variety of schools in a variety of capacities, and had a good working knowledge of these schools. Itinerant staff were also asked to

consider certain criteria in making a suggestion for a participating school. This criteria included: 1) the use of a tertiary system of intervention; 2) a relatively stable staff and administration; 3) a school with a solid system for requesting consultation/assessment and; 4) a school that had been using an RTI like model for a minimum of four years. I chose to work within this division for several reasons. The majority of the schools within the division have many elements in common: rural setting, small staff with similar professional development opportunities and close knit community and parental ties. The participating school serves students from kindergarten to grade six. The school has approximately ten full time teachers on staff (including their administrator) and a student population of These commonalities improve the transferability of the findings from the participating school to other similar schools. Having greater transferability of findings, stands to benefit other teachers, students and professional staff members within the division by potentially improving their understanding and implementation of the RTI model. In addition, the transferability of the study speaks to the trustworthiness of the findings. As indicated, I hoped to eventually use the results of this research to support my practice and the practice of my colleagues as participants in the RTI process division wide.

Another reason for choosing a school from within the participating school division is that they began the process of implementing RTI principles approximately four years ago. This is sufficient time for the school division to have had opportunity to provide professional development, and for the participating school to have identified factors that contribute to the effective implementation the model. In his book, *The New Meaning of Educational Change*, Michael Fullan (2001) suggests that a minimum of two

to three years is required to implement specific educational innovations and the participating school was required to meet or exceed this time frame.

Once the University of Saskatchewan Behavioural Research Ethics Board accepted my study, I approached the director of the selected school division and requested consent for conducting the research. The division required a copy of my thesis proposal as well as a two-page summary of my research objectives. Once division consent was obtained, I sought out suggestions for a potential participating school from the division psychologists and other learning support staff who have a working relationship with the schools, and therefore have knowledge of the use of RTI throughout the division. As these individuals work in multiple schools and play a critical role in the RTI process, they had a deeper understanding of a potential source for my research. Through discussion with these individuals, and by cross-referencing their suggestions, I identified one school for participation. Once the potential school was nominated, a request for participation was sent to the school through a school division staff member, as per their protocol. This request outlined the purpose of the research and provided details on how and when research would be conducted. The school was initially concerned that their participation would require a large time commitment; however, upon further explanation of the time required for participation, they consented to participate. Informed consent was explained to each participant prior to beginning interviews, and a copy of the consent form was provided for both the participants and this researcher.

Data sources

Because the purpose of the study was to identify what factors staff members

perceived as being effective in the implementation of RTI, the sampling was purposeful in that I spoke with those individuals who were instrumental in implementing and maintaining the RTI principles within the school. To do so I conducted individual, semi-structured and in-depth interviews (McMillan & Schumacher, 2010) with the special education teacher, a classroom teacher and an administrator. I chose to interview these individuals as they can be viewed as equally responsible for the implementation of the principles, yet present very different perspectives about this implementation. The principal of the school was responsible for accessing funding, providing professional development opportunities and supporting the teachers in the application. The special education resource teacher was responsible for participating in and providing professional development, for implementing some intervention, for creating program plans for students with more intensive needs, for co-teaching and for some assessment practices. The classroom teacher was responsible for initiating the program, for providing tier one and tier two level intervention and as a constant participant in professional and personal development related to the application of the model. I began by interviewing the school administrator and, based on her suggestions, I employed a snowball sampling technique to further identify potential participants from the teaching staff (Creswell, 2007). The classroom teacher was initially reluctant to participate as she felt she could not contribute anything different from her colleagues. Upon review and discussion with my thesis committee, I was encouraged to revisit the participating school and seek out a third participant and at this time, the classroom teacher agreed to share her insight. The interviews were designed to encourage the sharing of “experiences, attitudes, feelings and definitions of the situation in the participants’ own words and in ways that were

meaningful to them (Van Den Hoonaard, 2012). The principal participated in one thirty-five minute interview, and a follow up interview was conducted via email. The special education resource teacher participated in a one hour and thirty minute interview, which was sufficient in terms of depth and the topics covered so that a follow up interview was deemed unnecessary. She remained available via email to clarify certain statements made regarding the RTI model. The classroom teacher participated in a forty minute initial interview and a follow up interview via email. The interviews were recorded and transcribed, thus reducing researcher error and improving the authenticity and the audit trail of the findings. Participants had the final say in what data was used for the research, as I provided them with transcripts of their interviews for review and revision prior to data analysis. Each participant signed a data/transcript release form.

Along with interviews, document analysis was conducted. With the school and the division's permission I reviewed available documents that pertained to the use of the RTI model within the school. These included 2012-2103 School Goals, the professional resource upon which the school based their program implementation, division policies on Responsive Intervention, school data walls and division policy regarding assessment and evaluation. Document analysis was beneficial to my study as documents provided rich portrayals of the beliefs and values of the participants in the setting (Marshall & Rossman. 2011, p. 160). These documents emphasized the importance the teachers had placed upon integrating the principles of RTI into their practices. They also served to triangulate the data collected via interviews. Document analysis also provided some insight into division policies regarding tertiary intervention and responsiveness to student needs.

Data analysis

Once the data was collected, it was compiled and coded using thematic analysis following the work of Braun and Clarke (2006) which “minimally organizes and describes your data set in (rich) detail.” (p. 79). Thematic analysis was selected because it is compatible with constructivist paradigms within psychology and because of its ability to provide a rich and detailed, yet complex, account of the data (Braun & Clarke, 2006). Within the constructivist paradigm thematic analysis examines the ways in which events, realities, meanings, and experiences are the “effects of a range of discourses operating within a society” (Braun & Clarke, 2006, p. 81). Thematic analysis acknowledges the active role the researcher plays in identifying patterns or themes, in selecting those that are of interest and reporting them to the reader. Thematic analysis occurred in six phases. In the first phase I familiarized myself with the data by transcribing and rereading it several times. As I read through the transcripts and documents I began to generate some potential codes, which I recorded in my researcher journal. These notes were essentially a list of ideas about what was in the data, and what I found interesting about them. During the second phase, I generated the initial codes for the interviews and documents by placing them in a table format and typing a code in next to the text to which it applied. These codes were meant to identify a feature of the data that appeared interesting and to “refer to the most basic segment or element, of the raw data or information that can be assessed in a meaningful way” (Braun & Clarke, 2006, p.18). This process allowed me to begin organizing the data into meaningful groups. As per the thematic analysis model provided by Braun and Clarke, I worked systematically through the entire data set, giving full and equal attention to each data item.

Occasionally, extracts of data were coded two or three times, each time for a new meaning or point of relevancy (Braun & Clarke, 2006).

Once all the data had been coded, a list of codes was generated. This list was then sorted into potential themes. For this portion of analysis, the variables suggested by Michael Fullan (1983) as necessary for effective program implementation were considered as the initial themes: attributes of the model, implementation strategies, district and school factors and extraneous factors. A table was created with each variable as a heading and codes were subsequently placed in the column beneath the heading to which they applied. On occasion, codes were placed in more than one column.

Next, collated data sets for each theme were considered to ensure they formed a cohesive pattern and to be sure that no potential theme was over looked if it did not fit in with Fullan's variables. Finally, a concept map was created for each research question, and complimenting codes were compiled into distinct themes. During this process there were some codes that aligned more closely with one theme than another, and were therefore discarded from the themes to which they were less connected. Overall, ten themes were identified.

The fifth phase of thematic analysis required that each theme be named and defined and also involved the development of subthemes (Braun & Clarke, 2006). This did not take place independently of the other phases of analysis. Instead, it was essentially collapsed into phases three and four, as it occurred simultaneously as the themes emerged from the data. The subthemes are useful for "giving structure to a particularly large and complex theme" (Braun & Clarke, 2006, p. 22). By the end of this

phase, the ten themes had been clearly named, defined and refined. Their names are concise and provide the reader with an idea of what they are about. Thematic memos were particularly useful throughout this process, as they facilitated “discovering patterns, themes, and categories in [my] data” (Patton, 2002, p. 483).

Finally, for each theme, a detailed analysis was conducted and written. Extracts from interviews and documents were included to capture the essence of the theme or point being interpreted. The final report is a narrative description of the themes that are identified and provides a “concise, coherent, logical, non-repetitive and interesting account of the story the data tells” (Braun & Clarke, 2006, p. 93). The report summarizes the themes, patterns and ideas that were identified, and the means by which they constituted the factors or conditions that contribute to the effective implementation of the RTI model. It is expected that these results will provide guidance to other schools seeking to effectively implement the model. As such, the results are available to the school division from which they were derived for presentation or professional development.

Trustworthiness

The aim of trustworthiness in a qualitative inquiry is to support the argument that the inquiry’s findings are “worth paying attention to” (Lincoln & Guba, 1985, p. 290). In designing my research, I wanted to satisfy each of the four principles of trustworthiness: credibility, dependability, transferability and confirmability.

The credibility of my study was established via the time I spent in the school community, so that I gained sufficient understanding of the context. This included a school tour, three in-person interviews, time spent visiting with school staff and time spent emailing back and forth with the participants. I also relied quite heavily upon member checks, or feedback from my participants as I developed follow up interview questions and themes within the data. Review of their transcripts by the participants was also crucial, as it provided opportunities for the participants to clarify meaning and influence inferences made based upon the data. Credibility was also affected by the degree of detail I was able to provide. Because case studies are typically rich and in-depth, and “take the reader into the setting with a vividness and detail not typically present in more analytic reporting formats” (Marshall & Rossman, 2011, p. 267), this methodology strengthened both the credibility and transferability of my research.

Also contributing to the authenticity of my research is the use of multiple and different sources and the collection of corroborating evidence from these sources to shed light on a theme or perspective (Creswell, 2007). This process, often called triangulation, allowed me to “assess the accuracy of my findings, as best described by the researcher and the participants” (Creswell, 2007, p. 206).

The dependability of my study was context specific, and was subject to the variables of the school environment. As the culture of the school evolves and changes, so will the dependability of my study. That being said, rigorous efforts were made to provide an “audit trail” or a transparent description of the research steps taken from the start of my research project to the analysis of data and reporting of findings. This was

done via a researcher's notebook. The researcher's notebook also assisted in the confirmability of my study, as it provides process notes, and a researcher's journal to ensure my reflexivity. The use of thematic memos during data analysis and ensuring that all data was kept securely in a locked cabinet also contributed to the confirmability.

Ethics

Prior to seeking participation from a school division and school, ethics approval was obtained from the University of Saskatchewan. Following ethics approval, the process of identifying and procuring participants began. As this study was designed to explore the positive aspects of what makes the implementation of principles of the RTI model in one school effective, it posed minimal risk to the participants. Even so, written consent was obtained from both the school division and the administration at the school itself prior to initiating the research. Requests were made to each of the identified staff members for participation in the in-depth interviews, and transcripts were provided for review, clarification or retraction of data prior to analysis. Confidentiality is also a priority; I intend to protect the privacy of the school and staff members that participated. I do this not because I think the study poses any risk, but because of the vulnerable population with whom the teachers work. All data collected has been kept securely in a locked cabinet in my home. Any computer-generated files were encrypted and password protected. Names and identifiable information have been omitted or changed in the results portion of this report.

Summary

Any programming that can improve student learning and teacher practices deserves recognition. However, the effective implementation of that programming is dependent upon many variables, including development of the model, experiences with the model, district and school expectations, professional development and commitment to the program. I investigated one school's experiences of implementation of principles of the Response to Intervention model with the hopes of inspiring others to aspire to similar results and with the goal of respectfully exploring the factors and conditions that contribute to its effective implementation within the participating school. In this chapter, I placed myself within the research, as well as a discussion of the underlying assumptions of my study. Research methods including case selection, sources of data and data analysis via thematic analysis were also discussed.

CHAPTER FOUR

RESULTS

Chapter Synopsis

This chapter reports the results of the study. The chapter begins with discussion of the components of the RTI model identified as critical to the model's effective implementation. Following this discussion, the factors and conditions identified by the participants as contributing to the effective implementation of RTI principles are discussed.

Components of the Model

Tiered Intervention

We focus first on [the red zone kids], we try and put EA support in the classroom wherever those kids are because we try and keep them in the classroom as much as we can. We'll focus on their eIIP goals, we'll focus on the goals that they have to do. I will have goals with them and the EA who works with the kids on with those target goals might do a little bit of pull out as well. And then we really try and focus with those red zone kids within small group settings but within the classroom. My role is going into the classroom to do sort of a co-teaching, small group setting with those kids. Next we really target the yellow zone kids because those are often the kids that fall through the cracks if you don't highlight them. So, our small group settings also have the yellow zone kids highlighted, focusing on where they are at and trying to take them up to the next level. What is exciting are those green zone kids, which sometimes don't get any sort of special attention, we've really taken those kids, well actually all of the kids, we've taken them from where they are at, and it's been exciting because some of those green zone kids really need challenges and we've been able to challenge those kids and put them into novel studies and things like that at a young age where they are ready for it.

-Special education teacher about their RTI Model

The participants identified that they felt the use of a tertiary model of intervention is key in the implementation of principles of the RTI model. They identified three tiers of intervention: green, yellow and red. Beginning with green, each level required an increasing intensity of intervention. This model of qualifying students for more intensive intervention is based on the division and provincial model of service delivery (See Figure 2.1). The groupings the participating school used are like-ability, meaning that students are placed in a group that is at or just above their identified skill level. In the participating school these groups were also cross-graded. Groupings were cooperative and designed to encourage participation and positivity. The green level described students who were

progressing at an appropriate rate. These students were often exposed to preventative interventions on a class-wide basis, but did not require targeted instruction beyond what is appropriate for a student of their age and in their grade. The green zone also described students in need of enrichment. These students may have been progressing at a rate that exceeded their age and grade level. The participating school stated that allowing these students to work in cross-grade, like-ability groups improved their engagement and permitted them to continue growing, rather than spending time working on a skill that they had already mastered. There were twenty-six students in the school's green zone.

The yellow zone was the second tier of intervention. Students at this level were identified as demonstrating a deficit skill or skills, but were not struggling across all assessment areas. Those students that had specific areas of deficit, such as phonemic awareness or reading comprehension were placed in the yellow zone. They received targeted, small group instruction as well as the classroom wide interventions put in place in the green zone. Generally, the participants stated that these students responded to intervention within a few months or a year and were then considered green zone. When students did not respond to intervention at the yellow zone, they were moved into the red zone for more intensive intervention. There are five students working in the yellow zone at the participating school.

I think our role is to do differentiated instruction. We are able to meet the needs of all students. I'm thinking of a little boy that came to me and he needed an individualized reading program and I was able to provide that because my numbers were smaller.

-Classroom teacher regarding the role of a tertiary model of intervention

The final tier of intervention was the red zone. The participating school described

students at this level as either having had several months of yellow and green zone interventions without making progress, as being a grade level below their actual grade, or students who struggled across the subject area comprehensively. Often times these students were also struggling in other subject areas as well. Students at this level received the class wide interventions put in place for the green zone, as well as very small group and/or individual instruction. According to the participants, most of these interventions were provided either a) within the classroom via a co-teaching model featuring the classroom teacher and the special education teacher, or b) during the cross-grade, like-ability reading groups. These groups ran four days a week for an hour and half and encompassed reading and reading related skills, as well as skill improving games and a personalized, online spelling program. These students also receive individualized program plans. There are three red zone students at the participating school.

Assessment Practices

It's interesting, because some kids, they'll be really strong readers and then we'll realize they're missing diphthongs, like they really don't know what to do. And you'll see when they're reading, that they don't know how to sound it out. They don't really know what to do when they come to a word they don't know. So we test them on that.

- *Special education teacher providing an example of targeted assessment*

The participants also identified their assessment practices as being effective in the implementation of principles of the RTI model. According to the participants, the school and division utilized annual universal screening practices to identify which tier each student falls into, and then planned their intervention accordingly. At the start of each year, or when new students come in, a one-on-one assessment is conducted. This

assessment includes a reading fluency and comprehension portion, as well as an interview with the student and takes a minimum of fifteen minutes. One participant stated that this assessment, along with time spent with students during the first month of school really allows the teachers to get to know the students, which also informs teachers' choices about which cooperative learning group a student should belong to.

You really need to get to know your children. That culture is so important. In September when you are first starting to get to know the children and they are feeling comfortable you ask them to read with you, and that's when we do our reading assessment. This gives us an indication where they are in their reading... are they reading chapter books or are they just beginning to learn how to open the book. You can find all that out in a little interview when you are doing the leveled reading assessment.

- Classroom teacher describing assessment practices

Students received regular progress monitoring, both formal and informal, and check-ins. The participants also identified the use of targeted assessment as a key component of their model. They pulled the skills associated with reading apart into more narrow components, namely reading fluency, comprehension, spelling, word accuracy and a phonemic inventory. This type of assessment requires a much more comprehensive understanding of these skills. Within each of these categories reading and possible impediments were broken down further. Using targeted assessment, the participating teachers identified very specific skills that may be lagging, and provided remediation as necessary. Depending on the extent of the skill deficit, students were placed in either the yellow or red zone and intervention was provided. The participating school also set school goals around assessment practices including base-line data collection on each student and regular monitoring to show improvements in each classroom and a school

needs assessment in September of all new students. Assessment and regular progress monitoring were identified as crucial elements of an RTI model in several other American studies as well. These findings are further discussed in Chapter 5: Discussion.

Division-Based Supports

They're not directly involved with this, but, I'm thinking about a little guy like [Student name]. For example, he's had Ed Psych testing. He's in the middle of getting; no I think he's finished his SLP testing. It's getting ideas from our learning support team of best practices that we can do for him within that small group setting. It's interesting you bring it up, because I actually just asked the counsellor to be involved with him because of the anxiety piece. She observed him in a small group yesterday with me and she said to me, you know, the more verbal prompts you gave him the more he went off into his own world. And it was good for me to hear that because I'm very verbal and it was a good perspective to bring for me in all of that. It gave me some ideas to say, stop verbally prompting, give him a visual. So, it's hard to be directly involved, but the work that [they] do impacts how we group our kids. We have an amazing group of teachers and they really try and use the best practices for these kids.

- *Special education teacher describes the role division based support staff plays in their model*

Sometimes when the school had identified a lagging skill or skills and provided targeted and consistent intervention, the student continued to struggle. At this point, the participating school identified access to division-based supports such as speech and language pathologists, occupational therapists and psychologists as influencing the effective implementation of their model.

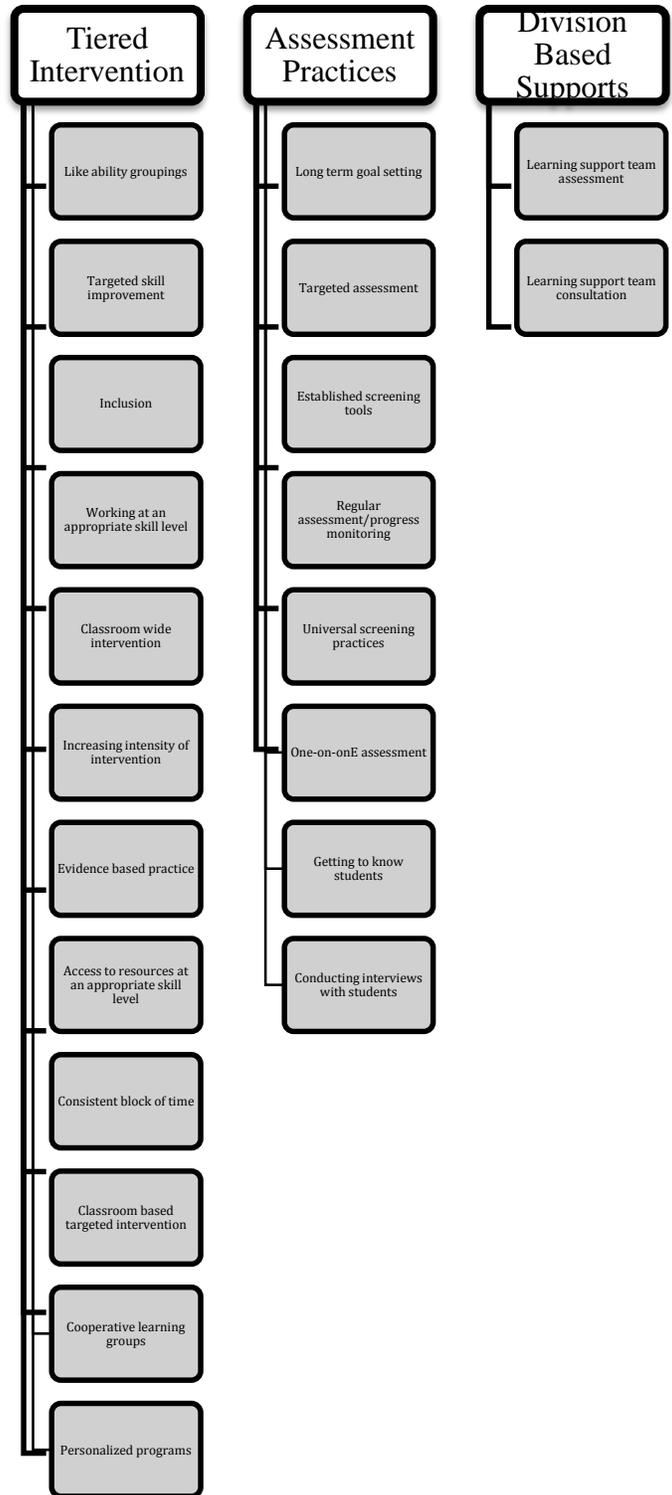
I always reach out to experts to become part of our team. If we have questions or if what we are doing is just not working, we ask for additional help. We reach out to OT, speech, and the psychologist.

- *Classroom teacher in response to how division personnel support their implementation process*

Depending on the skill deficit, the school stated that they may have requested a consultation and/or a formal assessment. Based on the consultation process or the

assessment, the division-based support staff member made evidence-based recommendations for remediation, and, when appropriate, accommodation. At this time a formal diagnosis of a Learning Disability, Cognitive Disability or referral for a more comprehensive mental health or medical assessment may also have been made. Teachers and parents were provided with strategies for working with each individual's unique pattern of strengths and weaknesses. Figure 3.1 summarizes the components of the model identified as critical in implementing the principles of RTI, as well as their corresponding codes.

Figure 4.1. Components of Model with Corresponding Themes and Codes



Factors That Contribute To Effective Implementation of RTI Principles

Professional Development

Our teachers are definitely readers and they're researchers; they're always reading, you know, trying to see what is out there. And, experience, they've been doing this for a lot of years. Then they're taking what they like from the research and also doing what they know works. The division has also brought in different presentations, like your Debbie Miller, and now this latest one, Sandra Herbst - I had three go to that. So the division has been good, and the teachers pick from that as well. So a bit of both. And when they get together, they're sharing their own learning because they like to read and research, which is exciting.

- Principal in response to where their program ideas come from

For the participants, professional development encompassed a broad spectrum of learning opportunities, from personal research to school division and Saskatchewan Teacher's Federation provided in-services and workshops. For the purpose of their model, the program initiated with the grade one and two classroom teachers approximately four years ago. According to the participants, these teachers were not satisfied with their existing model of teaching students to read and to develop reading-related skills. They felt that that model worked well for the average student, but did little to accommodate the students that fall on either end of the spectrum. Together with the special education teacher, they began researching other alternatives, and decided upon a Response to Intervention approach. Subsequent to that decision, these teachers began choosing professional development opportunities that aligned with principles of the model. On some occasions, all staff participated in professional development opportunities. On others, one or two staff members attended, and shared their learning with other staff members on school based professional development days. Staff members also developed professional and school goals that reflect the model, such as, "All students will increase their reading comprehension skills by at least one grade level by the end of June, 2013." After identifying goals, staff developed action plans for accomplishing these goals, and created indicators for measuring the effectiveness of their model. The

participating teachers used professional learning communities to share ideas, discuss the development of the model and to plan.

My belief as a teacher is that there are so many programs out there that we have to pick and choose from each program what works for the students. When we sit around as a team and chat we share our experiences with the different programs. I might be bringing to the table parts of what Ann Ingham taught me thirty-five years ago, or my colleague taught me about the Slingerland method of printing, or whatever it is, animated literacy, and you pool all of that together and you make it work. So I chose Reading Recovery to work with the individual students because that's what I had experience with.

- *Classroom teacher describes the use of specific professional development learnings and the use of professional learning communities.*

Training for educational associates was also integrated into the program plan and was identified as a contributing factor to the effectiveness of the school's RTI model. As will be described in Chapter 5: Discussion, there is a wide research base regarding professional development that supports the participants' identification of it as a significant contributor to the effective implementation of their RTI model.

Resources

Anything we've read in the reading comprehension literature states that you need lots of literature at the level where they're all at, and there's so many different levels for the kids. So we've spent a lot of money on computers programs, like the Raz Kids, the technology, that A to Z that we've printed off, plus, buying lots of kits and different things so there's literature galore in each of the classrooms at those levels. I think that's important.

- *Principal on having access to resources*

The participating school also identified access to resources as being an important component of the implementation of their model. This included technology, teaching resources, reading resources, time for collaborating, planning and assessing, a data wall and student access to a variety of teachers. Because the literature indicated that access to

a wide variety of resources at a variety of text levels is necessary to foster the conditions for learning to read, the school devoted not only money, but a significant amount of time to improving the quantity and quality of books to which their students have access. It was also important to ensure they had multiple copies of each book at each level. The school also set school goals around improving their resources. This included continuing efforts to close the gap between the school library and the “ideal elementary library” based on the *Titlewise Survey* and an increase in literacy resources with a corresponding and aligning library budget. The *Titlewise Survey* is a collection analysis tool provided by circulation and catalog vendor, Follett Library Resources. This program allows schools to export and send information about their entire book collection for an instant statistical analysis. By completing this study once each year, schools can identify areas of the collection that need weeding and/or additional book purchases. They can also compare past surveys to determine if they are meeting their goal of providing a current, balanced collection. The staff also incorporated technology into their program. Not only were they able to download leveled books cost effectively from a website, but they used interactive computer programs for independent reading and spelling. By utilizing these programs the school gained access to resources at an appropriate skill level. These programs also provided progress monitoring and helped identify deficit skills areas. The school was then able to provide very specific information about each student through the use of data wall. A data wall is a visual representation of individual student data that shows students’ progress and provides a forum for rich conversation among teachers and educational associates regarding progress and intervention. It is a tool to stimulate and focus the learning environment.

As the school indicated that the development of their RTI model is ongoing, having access to shared research and professional development materials was also necessary. The school was often able to obtain multiple copies of a resource so that teachers could share ideas and discussion related to that text. When necessary, teachers shared personal resources until school resources could be purchased.

Support When Needed

Even with all these things in place, we've got a few students that, with all this intensive support, we were still not satisfied with where they were and how they were moving. So you bump it up a little bit. Something is going on with this kid and we need some help, you know, ed psychs and special education teachers have been great for that. They've attended team meetings, too, and helped us brainstorm, helped us communicate things with the parents. I think that has been good too. Yes, definitely a team. We couldn't do it without them.

- Principal regarding division based supports

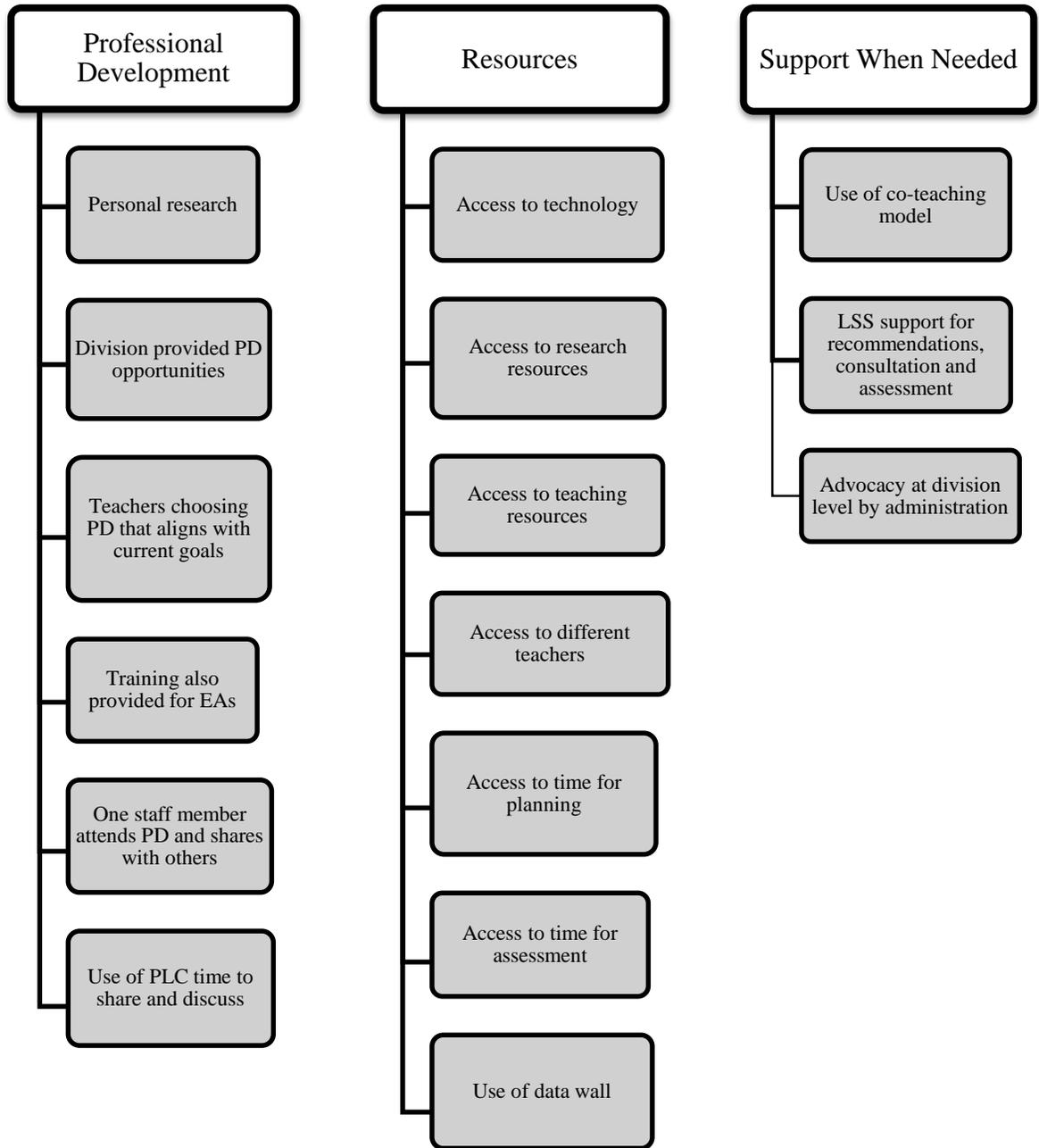
The sixth theme identified by the participants as contributing to the effective implementation of the program was support when needed. This included assistance from division based support staff such as SLPs, OTs, and psychologists as well as in-class support from the special education teacher via a co-teaching model. Each participant identified that they were most likely to access these supports when sustained evidence-based interventions did not seem to be improving a student's outcomes, or when a student was quite significantly behind their grade/age level peers. At that point, the school sometimes engaged division personnel for either consultation or assessment purposes. These division support staff provided suggestions for working with the student that were very specific to the individual's unique profile. According to the special education teacher, assessment or consultation may also have provided clarity as to what was appropriate to expect of that individual, and how the student's specific strengths may be

applied to improving deficit areas.

Two participants also identified advocacy as an important subtheme of support when needed. The participating school division places particular emphasis on accountability, or the process of assigning responsibility for conducting activities in a certain way or producing specific results (Saskatchewan Ministry of Education, 2012). As such, the participating school has been called upon to justify their use of the cross graded reading groups to both school division personnel and parents. The school administrator has provided presentations and advocacy in these instances.

The participating school also identified access to division personnel as a potential roadblock to the implementation of their model. One participant stated that having limited time with their assigned OT, SLP and psychologist forced them to use past experience to identify interventions they felt would work. When asked what changes they would make to the implementation of their model if they could have anything they wished, one participant stated they would have more regular visits with their school OT, SLP and psychologist, and they would have testing opportunities for all of their “at risk” students with the psychologist. Figure 4.2 provides an overview of the themes of professional development, resources, and support when needed, and their corresponding codes.

Figure 4.2. Factors that contribute to implementation with corresponding themes and codes



Engagement

Well, I would say before, your struggling kids, when it was reading time, let's say, or in L.A. time, I don't think they were excited because they struggled, and now that we've set it up with our flexible groupings, they're skipping, they can hardly wait to

go to their groups. So when kids are excited about reading, they're going to improve. So we're really excited about that. As well as, your kids that were really in the high level, before, I think it was frustrating for them in the class, because they are already reading at a grade five level and they're still doing sounds, so now, they are actually with a group that are doing novels and novel studies under the guidance of the teacher, so they're excited too.

- *Principal regarding student engagement*

Engagement describes the level to which students, teachers, parents and other staff members were committed to the model, and conversely, to the level to which the model encourages commitment. Specifically, engagement can be defined as, "A psychological process, specifically, the attention, interest, investment and effort expended in the work of learning" (Marks, 2000, p.154-155). The participants felt that the use of RTI principles in teaching reading greatly improved the overall level of engagement in this learning process. Prior to incorporating RTI principles, the participants described both students and teachers as sometimes feeling discouraged. Teachers were frustrated with the feeling that they weren't challenging the students that were exceeding expectations, and weren't providing intensive enough support for the students that were struggling to meet expectations. Students that fell into either of those categories were thought to be disengaged by either the simplicity or complexity of the learning tasks. By applying the principles of the RTI model, the participants felt they were able to improve the level of support teachers could provide all students, which, in turn, improved the overall level engagement of both the staff and students. This improved engagement provided encouragement to teachers to continue to provide improved student support, and the cycle continues. The resulting positive outcomes include improved feelings about reading and writing, an increase in parent involvement, improved reading assessment scores, and a decrease in student and teacher frustration levels

The results of smaller groups: Students are so enthusiastic, they can hardly wait to go to literacy groups. This year I had a parent at meet-the-teacher night ask, "So when are literacy groups starting? My daughter loved literacy groups!" I would see kids skipping back from their literacy group. They'd be so excited. So there is the... enthusiasm, there are the results

- *Classroom teacher in response to what motivates the staff to continue with their RTI model*

Research has shown that increased teacher support correlates directly with improved teacher and student engagement, further confirming the participating school's identification of engagement as a theme that contributes to the effective implementation of RTI principles. This will be explained further in Chapter 5: Discussion.

The participants also stated that parents, as well, became more engaged in their child's development of reading related skills through information nights, regular progress monitoring and, occasionally, work bees to organize and put together resources. In addition, the school created school goals to support engagement. An example of this is the development of classroom newsletters informing parents about literacy learnings to promote home conversations and enthusiasm for the program.

Team Philosophy

We have years of experience and we know what works and what is effective, so don't throw those strategies out, but keep researching and learning and finding new ways to supplement what works and improve upon it. We can always improve. You never want to be totally satisfied with how we do things because that is doing a disservice to our profession and to our student.

- *Principal in response to how the use of the RTI model began in their school*

An eighth theme, team philosophy, emerged as the data was analyzed. Although the participating staff members are experienced teachers, they were not set in their ways.

Their team philosophy was to provide the best instruction for student learning, not necessarily the type of instruction they were most comfortable providing. Therefore, these teachers seemed willing to try new things and to change their own teaching practices in order to best support their students. Each participant described teachers feeling dissatisfied with the pullout model of classroom support in which students requiring more intensive supports were pulled out of class and provided instruction in the resource room by the special education teacher. Not only did this process create some stigma around needing to access supports, but it also required that those students miss out on what was going on in the classroom. As well, both teachers described classroom teachers as feeling that they were able to provide an appropriate level of instruction for students falling in the average range on inventories of academic skills, but that they were struggling to meet the needs of students whose skills were still emergent and for those students who were exceeding the classroom expectations. By integrating principles of the RTI model, classroom teachers were able to provide instruction at each student's level. Participants described how every student now seemed to feel challenged, but not over or underwhelmed by the expectations. This philosophy has permeated the culture of the school, creating an environment that was supportive and open-minded.

Everybody is where they are supposed to be. They are all excited about what they're doing, which wasn't the case before.

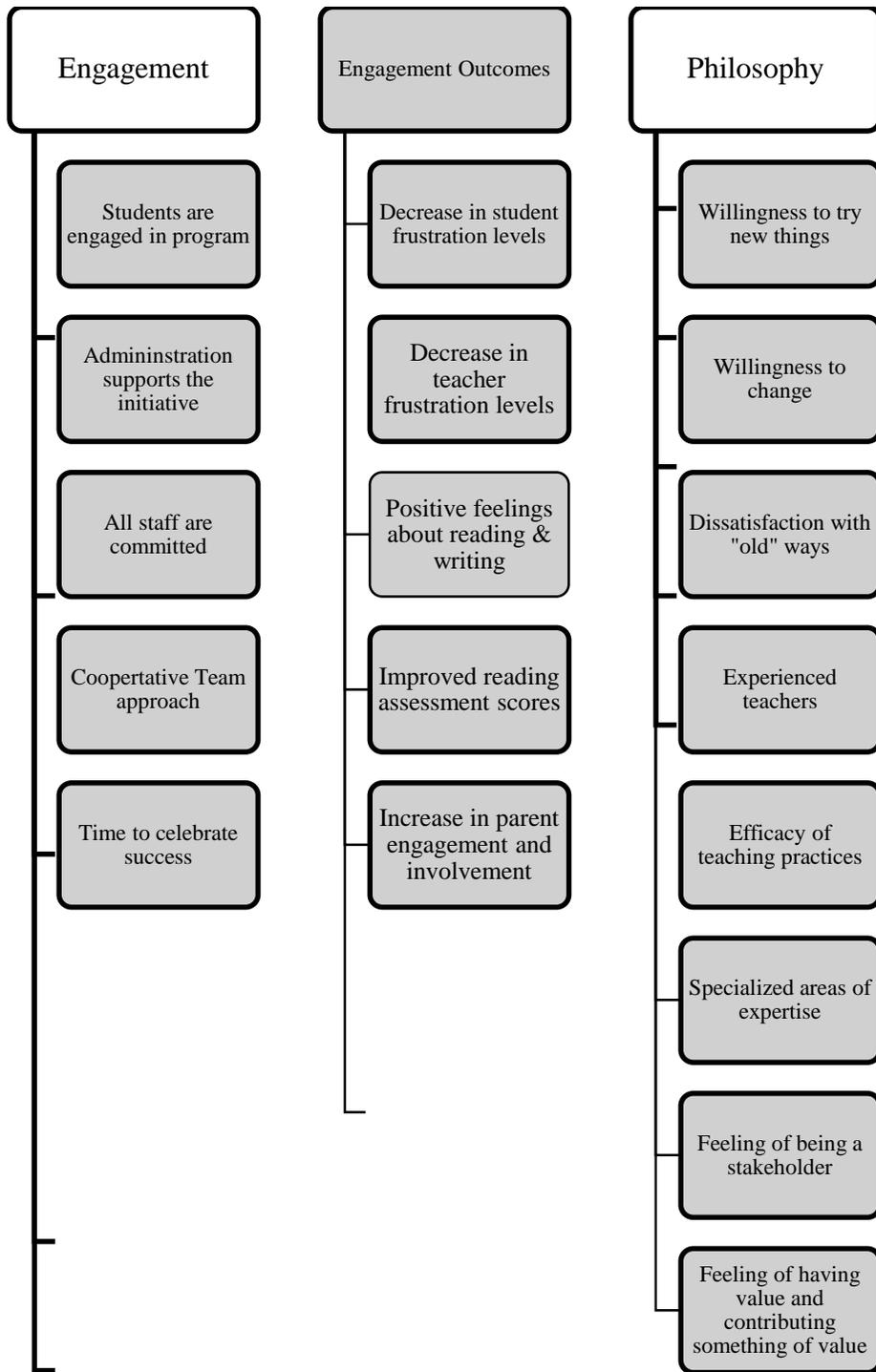
- Principal regarding team philosophy

Contributing to this theme was the general level of experience that the teachers were able to provide. Each participant referred to the teachers responsible for providing the programming as "expert" with fifteen or more years of experience behind them. This contributed to the efficacy of the teachers. The teachers seemed to believe in their ability

and the ability of their co-workers to provide learning opportunities that are valuable for their students. They believed themselves capable of adapting to innovation, and of learning new methods. This belief seemed to allow them to build a team spirit in which each member was both valued and important to the overall goals of the group. Each teacher and E.A. involved in the application of the model feels as though they are a stakeholder in the overall success of the program. They feel their contributions are valued and that they have something to contribute to student learning. This has also supported the overall team philosophy that exists in the school. Figure 4.3 provides an overview of the themes of engagement and philosophy, and their corresponding codes.

- My role is to be part of a cooperative teaching team. We start out as a group in the fall and we do assessments to find out where the children are. We have certain assessments that we use in the reading area. Then we take a look once the assessments are done, where would these children fit in the leveled reading program? We look at personalities, we look at their ability, we look at the culture of the classroom, we look at EA support, and we create a schedule. My role is to be part of that team to make it work.*
- *Classroom teacher in response to her role in the maintenance of their RTI model*

Figure 4.3. Factors that contribute to implementation with corresponding themes and codes



Funding

We've dedicated a lot of budget, too, because anything we've read indicates that you need lots of literature at the level where they're all are at, and there's so many

different levels for the kids and so we've spent a lot of money on computer programs, like the Raz Kids, the technology, that A to Z that we've printed off, plus, buying lots of kits and different things so there's literature galore in each of the classroom in those levels. I think that's important. And every year you keep adding to it because it's expensive and we have a small budget here!

- *Principal regarding allocating funds*

Funding can make or break a change process, particularly when the model being followed requires increasing access to resources and freeing up time (Fullan, 2001). Thematic analysis of the interview transcripts and associated documents revealed that the participants believed allocating funds for model-specific initiatives was critical in the effective implementation of principles of RTI. Funds were required for purchasing resources such as multiple copies of leveled reading materials, research materials for teachers and resources such as technology and skill specific interventions. As well, funds were provided to bring in substitute teachers to provide time for teachers to organize materials, create the data wall and attend professional development opportunities. The participants also had to find ways to do things as cost effectively as possible, such as printing copies of leveled books from an online source and asking retailers how they might get the best rates possible.

While the participants considered funding crucial to implementation of the RTI principles implementation, they also cited it as a potential roadblock. Annual budgets have necessitated the acquisition of resources occurred over a period of time.

Participants stated that each year the school was able to re-invest in their model, to provide access to funds for new initiatives and to bolster their resources inventory.

Of course money. You know, we'd want more money for more books, more literature, and training.

- *Classroom teacher in response to how she'd use a magic wand to improve their*

Time

It's funny we took a whole day. And it's funny because it's like here, here's what we did. And then the teachers and I we took a day to plan what we wanted, what tests we're going to use. But it's definitely been a process.

- *Special Education Teacher in regard to the use of time to build a data wall*

Educational change requires time. Educational change and reform is a process that ideally takes place over months and years (Fullan, 2001). The participants identified time as a critical element of their program implementation. Applying principles of the RTI model required time for research, professional development, planning, sharing, organizing, reviewing, purchasing, assessing and summarizing. Access to this time occurred both during the school day on designated professional development or professional learning community days, and also outside of school hours. Teachers often met before and after school to share resources and discuss research findings. A school goal was also devoted to the creation of time with action plans to create time for teacher talk at staff meetings around the goals of literacy. While time contributed to the implementation of principles of RTI, it was also a roadblock. One participant stated that ideally more time would be allocated for assessment (an extremely time consuming task), as well as for meeting and planning as a group. As mentioned, each participant stated that teachers often spent personal time reading and developing lesson plans associated with the principles of the model, in addition to meeting as a group to plan, organize and share findings. This type of activity occurred on top of their regular classroom teacher duties such as marking, planning, and researching. When asked to identify some of the roadblocks encountered by staff while implementing their RTI model, each of the

participants identified time. While this research reveals that the school felt that the time they were able to commit to the implementation and maintenance of their model was critical to its effectiveness, they also recognized that with more time the model would likely improve.

I would say more time. Time to assess, interview, time to set goals, time to have PLC meetings, there is never enough time.

- Classroom teacher in response to what might improve their RTI model

Staffing

Having an administrator that supports us. For example, we have taken PD day do [the data wall] and she was very supportive of that. She is willing to support us where we put our money. She's not overseeing "oh what did you spend that on" she's just saying here's some money. Having the faith in her teachers, to move in the best direction. And she's definitely a part of this in coming in to see what we're doing and supporting us with that. Also, bringing in the EAs, too. They feel very involved because after we made the wall, then we brought them in to show them and asked them what part they would like to play with that.

- Special education teacher regarding the qualities staff members contribute to the model

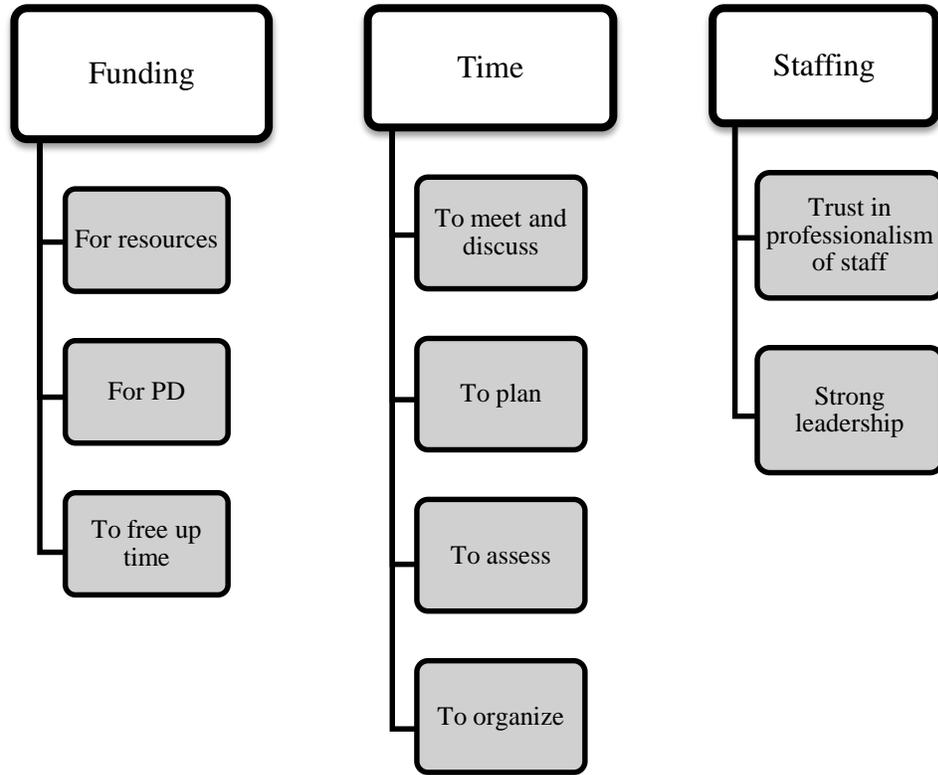
Each of the participants stated several times that much of the success of their RTI program could be attributed to the staff members involved. This included the school administrator, classroom teachers, educational associates, and the special education teacher. The findings of this study revealed that a supportive administrator and an overall culture of professionalism both contributed to the implementation of the model. In the participating school the principal played a supportive role in the day-to-day implementation of the model, and also provided access to both time and money for programming needs. The special education teacher described this administrator as trusting in the professionalism of the staff. The principal played an important role in the

model, but did not micromanage the aspects in which she did not actively participate. The staff had faith that their administrator supported them and appreciated the work they were doing. The culture created by the principal seemed to be present in the feelings other staff members had towards one another as well.

- Without her, the program probably wouldn't have been as successful as it is. She is our leader, our supporter. She trusts our professional choices. She also supports us with funding and scheduling.*
- *Classroom teacher regarding the school principal and her role in their RTI model*

Each of the participants spoke very highly of their colleagues. The special education teacher even described each teacher involved as “amazing,” “expert,” and a part of the “team.” Figure 4.4 provides an overview of the themes of funding, time and staffing, and their corresponding codes.

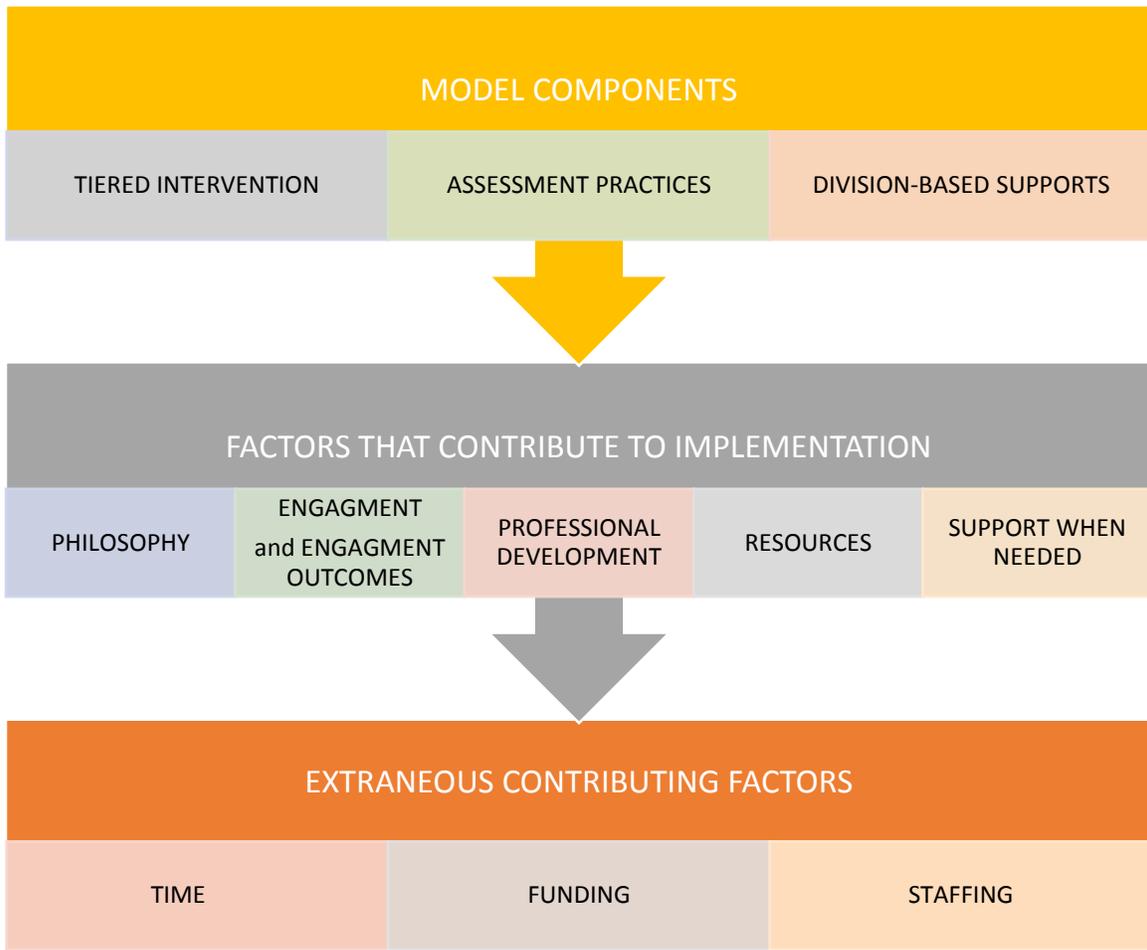
Figure 4.4. Extraneous factors that contribute to implementation with corresponding themes and codes



Summary

This chapter named, defined and described the ten themes identified by the participating school as the key features of their Response to Intervention model and as important to the implementation of these features. The identified themes are: tiered intervention, assessment practices, division-based supports, time, funding, professional development, team philosophy, resources, engagement, staffing and support when needed. Portions of each participant’s interviews and school documents were also used to emphasize each theme, and to provide an example of the participant’s perspective regarding the usefulness of RTI in their school. Figure 4.5 provides a summary of the successful implementation of the RTI model.

Figure 4.5. Overall model of successful implementation of RTI model.



CHAPTER FIVE

DISCUSSION

Chapter Synopsis

This chapter begins with a description of the results and the implications of the findings in terms of the current research literature. Each of the ten themes identified in the previous chapter are then placed with the context of Michael Fullan’s four variables that affect program implementation. Current research regarding the identified themes is also reviewed, as are implications of this study at a school and division level. This is

followed by a discussion regarding the limitations of the current study and finally by a section dedicated toward recommendations and suggestions for future research.

Introduction

The participants identified three components of their RTI model as critical to its effective implementation. As well, seven factors or conditions were identified that contribute to effective implementation. These themes can each be placed within the context of Michael Fullan's four variables or categories affecting program implementation. In a 2006 critique of Fullan's work, Pedro Noguera stated "the clearest evidence of the value of Fullan's work lies in the fact that his ideas have transcended national boundaries and been embraced in Canada, the US, England and a number of other nations" (p.129). Placing the themes that developed from the data within the context of Fullan's categories provides further evidence of the validity of these themes. Each category and the corresponding themes are described and explored below.

Category 1: Attributes of the Model

Ray Rhine (1981) stated that the attributes of the model being applied will affect the quality and efficiency of the program implementation. The goals of the program, the clarity of the means by which it is operationalized and the evidence base of the materials all contribute. In order to implement the cross grade reading groups for which the participating school utilized principles of RTI, they had to identify and expand on certain attributes of the model. Much of their model was adapted from the book *What really matters in Response To Intervention: Research based designs*, by Richard Allington

(2009). In analyzing the data collected throughout this research, several attributes of the model became apparent. Three themes were developed: tiered intervention, assessment practices and division-based supports. Each of these themes encompasses the components of the model the participating school identified as critical in their school model of RTI.

The participating school used three tiers of intervention, each one of increasing intensity. The first tier provided classroom-wide interventions that all students may have benefit from. This included co-teaching. The second tier provided more targeted, small group instruction, but generally also took place in the students' classroom. The final tier involved more intensive small group or one-on-one instruction and very targeted skill development. Implementing three tiers of intervention is consistent with the models being used in most of the United States. A 2009 study by Berkely, Bender, Saunders and Peaster found that it is most common to have the first tier consist of general education interventions, including differentiated instruction, administered class-wide or to struggling students who are identified through universal screening and/or benchmark assessments. In general, tier two intervention involves more intensive small-group interventions with frequent progress monitoring; tier three involves highly intensive, specifically targeted individual instruction with even more frequent progress monitoring that may or may not include placement in special education. The participating school stated that they currently have three students receiving this level of support. In the past, they have had as many as five. While this is a relatively small number, it is proportionate to the school population, and to that of many other schools in this division.

Tiered intervention and assessment practices go hand in hand. The participants

identified their assessment practices as being another attribute of the model they feel is critical to the successful implementation of RTI principles. The school's RTI system relied on two types of evaluation: school-wide screening and regular progress monitoring. Assessment occurred at each tier, beginning with universal screening and progressing to formal assessment by a speech and language pathologist, occupational therapist or psychologist when necessary. Skill-specific assessments were also used to target deficit skill areas and track progress. The special education teacher identified the school's ability to conduct these specific assessments as a key feature of their program. The participants demonstrated pride in the school's ability to separately assess and target reading-related skills such as comprehension, phonemic awareness and fluency. Ysseldyke, Burns, Scholin and Parker (2010) suggested these precise assessment practices allow teachers to choose appropriate interventions for their students, thus improving the effectiveness of the model. The assessment serves to inform intervention. Assessment must also be frequent and sensitive to the curriculum as many formal assessments do not cover curriculum-based skills comprehensively. When schools do not choose assessment procedures that are consistent with their purposes of RTI, the effectiveness of the model is impaired (Ysseldyke, Burns, Scholin, & Parker, 2010).

When the school-based intervention strategies and assessment procedures are not successful in improving the student's academic outcomes, the school identified access to division-based supports as a critical attribute of their RTI model. This is an area of particular interest for me. In my future role as a registered psychologist in a school/assessment-based setting, I hope to be an integral part of the support team for the schools with which I work. The current movement is away from a largely assessment-

based practice, to a more holistic approach in which consultation and follow-up become more important (Saklofske & Grainger, 2001). As the model of service delivery evolves, I, too, can play a role in the effective implementation of RTI principles by displaying a willingness to have my participation redefined in ways that support effective implementation (Reid, 1987). Utilizing principles of the RTI model including tiered intervention, evidence-based practice and both formal and informal assessment, will be necessary to facilitate this more holistic approach. Part of my reason for conducting this research was so I could observe and identify the components of the RTI model that the participants feel are crucial to its effective implementation, as well as the themes they feel have contributed to the implementation of these components. I did so, hoping that I may be able to share this knowledge with other schools who wish to implement a similar program. I also did so, hoping to identify ways in which I may be a more effective psychologist. I wanted to hear from participants how they believed a psychologist could support such a model, and the ways in which the current system of service delivery might be improved.

I have completed eight months in a practicum as a psychologist and have now worked full-time, under supervision, as a psychologist for five months. This provided me an excellent opportunity to observe the system from the perspective of a division-based support staff member. During that time I participated in many conversations about the current model of service delivery, and the ways in which the team members would like to see it evolve and improve. I plan to combine this perspective with the insight I was able to glean from the participants to shape my own practice, and perhaps, to influence the manner in which services are provided in my future work setting.

Category 2: Implementation Strategies

Fullan (1983) stated that the strategies used to implement new programming present a new set of variables that contribute to the effectiveness of that program. Implementation procedures such as on-going professional development, assistance from division staff, information monitoring and feedback have all been found to relate to the degree of program implementation. Within this category, the participants identified three themes: professional development, resources and, thirdly, support when needed. Each of these contributes to the implementation and maintenance of RTI principles.

In their 2001 study, Garet et al. used a national probability sample of 1,027 mathematics and science teachers to provide the first large-scale empirical comparison of effects of different characteristics of professional development on teachers' learning. The results of their research indicate that three core features of professional development have significant positive effects on teachers' self-reported increases in knowledge and skills and changes in classroom practices. These three features are: (1) focus on content knowledge, (2) opportunities for active learning, and (3) coherence with other learning activities. The participating school has also identified each of these core features as contributing to the implementation of the principles of the RTI model they have chosen to focus on. Fuchs and Deshler (2007) further emphasized the critical nature of professional development, citing "significant and sustained investments in professional development programs to provide teachers with the array of skills required to effectively implement RTI as well as to deal with ongoing staff turnover" (p. 131) as a key feature of implementation of RTI principles.

The participants indicated that access to a wide variety of teaching and research resources was a critical component of their RTI model. Allington (2009) suggested that providing an adequate supply of texts that students find interesting and can read accurately, fluently and with good understanding is necessary for a reading intensive intervention model. As well, it has been suggested that a school-wide inventory of these resources be developed and maintained so that staff may become aware of gaps in their intervention plans due to a lack of resources (Wright, 2007). The school found many creative ways to purchase or print reading materials that allow students to be successful at their level. This included improving both classroom-based and school libraries as well as purchasing skill building games and accessories. The school also provided access to technology-based programs that allowed regular progress monitoring and individualized learning. The school allocated a room for cataloguing and storing these materials in such a manner that everyone could easily access them. As well, the school purchased research materials for their teachers. Access to high quality training materials is also a suggested implementation strategy for adopting a RTI model (Todd & DiPerna, 2008; Adelman & Taylor, 2003).

Another strategy that the participating school employed when implementing principles of the RTI model was accessing outside supports when needed. These supports included psychologists, occupational therapists and speech and language pathologists. These individuals served to build capacity among school personnel, provide formalized assessment when required and consult on intervention strategies for struggling students. By incorporating these individuals into their model, the participating school can

“support the needs of more students” while continuing to meet the standards of the model (McIntosh et al., 2011; Barnes & Harlacher, 2008).

Category 3: School and District Factors

The district and school factors are local context characteristics that are extremely critical in determining the outcome of change efforts (Fullan, 1983). This includes why and how a district or school decides to implement a particular model or program, as well as staffing changes, leadership, collegiality, parent engagement and division-based supports. Within this category, the participating school identified two themes as contributing the implementation and maintenance of their RTI model: engagement, philosophy, including experience.

The participating school identified engagement as having a cyclical effect on the effectiveness of program implementation. By becoming engaged in the implementation program, teachers were able to provide a more individualized level of support to their students. Teacher support is linked to student achievement, attendance, commitment and engagement (Klem & Connell, 2004). Current research suggests that a more personalized learning environment, such as that created by the participating school, will directly contribute to improved levels of student engagement, higher attendance and test scores (Klem & Connell, 2004). As student outcomes improve, the students are more engaged and consequently, the teachers’ level of engagement is reinforced.

Teachers' willingness to implement new instructional practices is also a key factor influencing educational improvement (Ghaith & Yaghi, 1997). The teachers at the participating school adopted a philosophy that included embracing change and

innovation. The participants each communicated that the teachers at the school felt that the educational changes they implemented were necessary and valuable. A 1983 study by Sparks found that teachers' perceptions of the importance of the new practices were positively correlated with program implementation. This perspective, combined with the manner in which the suggested changes would align with their teaching practices, contributed to the adoption of their collective philosophy which contributes to the successful implementation of their RTI model.

Contributing to the team philosophy is the collective level of teacher experience. The teachers participating in the implementation and maintenance of the school's RTI principles are described as each having ten or more years of teaching experience. This is believed to be linked to these teachers' sense of efficacy within their role. An impressive body of literature supports the contention that increased self-efficacy may have beneficial impact on motivation for teachers as they pursue improvement in pedagogical skills and professional knowledge (Erdem & Demirel, 2007).

Category 4: Extraneous Factors

There are certain conditions or events that also contribute to the effectiveness of any new program implementation but cannot be anticipated. These extraneous factors occur at the local level and are important to recognize because they are often uncontrollable and may have powerful consequences on the continuation of programs (Fullan, 1983). Within this category, three themes emerged from the data collected: funding, time and staffing. The participants each identified these as contributing to the effective implementation of the principles of RTI on which they have chosen to focus.

Interestingly, the participants also identified two of these themes as areas of their model that could be improved, and that could even act as roadblocks to effective implementation of the principles. Both funding and time are key features of the effective implementation of RTI principles. The school identified a direct correlation between access to each one and effective implementation. The participants felt that if they were to have access to more time or more funding, the overall implementation and maintenance of the model would improve. In their 2008 meta-analysis of eighty-one studies, Durlak and DuPre placed funding in the top four community level factors that affect educational program implementation, but they go on to state that “funding is a necessary but insufficient condition for effective implementation, although many funders do not provide sufficient time or money for implementation” (Durlak & DuPre, 2008, p.336). What this implies is that, while money and time may be allocated, seldom is the amount of either one realistic for implementing the attributes necessary to meet the expected outcomes of the program.

Staffing played a unique role in the implementation of educational programming. The participants identified positive leadership and a culture of professionalism as aspects of their staffing that affect implementation of RTI principles. This culture of professionalism included a high level of commitment to the collective goals of the school. The teachers involved in the implementation of RTI principles had a voice in creating these goals, and were involved in developing the school vision. According to the participants, the teachers believed that by pursuing these goals they could, would, and did improve student outcomes in the area of reading and reading-related skills. Also included in this culture is the understanding that each teacher is living up to their obligation to maintain a high standard of professional conduct and teaching practice (Saskatchewan

Teacher's Federation, 2006). Aside from their demonstrated engagement in the application of RTI principles, the teachers also demonstrated high professional standards, which have certainly contributed to the implementation of RTI principles. Dulak and DuPre (2008) described these characteristics as "specific staffing characteristics" (Dulak & DuPre, 2008, p.337). Included in their list of factors identified across studies as contributing to program implementation are leadership, a program champion and administrative support.

The participating school identified strong, supportive leadership and positive inter-collegiate relationships as contributing to their RTI model. They also had one or two staff members who led the charge for implementing the principles of RTI, and to whom the others looked for guidance and support. Dulak and DuPre (2008) found that there is a significant main effect for principal support and a significant interaction between principal support and the fidelity of teacher's implementation on student outcomes. When both of these factors were high, students improved significantly on all outcomes; however, when principal support was low several negative changes were observed in students.

As mandated by *The Teacher Federation Act, 2006*, teachers are required to reflect upon the goals and experience of professional practice, and adapt their teaching accordingly (STF, 2010). When the teachers at the participating school reflected upon their teaching practice, they felt they could do more to meet the needs of their students. As stated during the interviews by the participants, once the decision had been made to implement change, the participating teachers were quick to begin the process of acquiring

new skills necessary for implementation and delivery, and in integrating previously learned skills that met the program goals. They did this so that they could maintain the highest level of professionalism while providing an environment that allows all students to grow and develop. While this too is included with *The Federation Act, 2006*, it is my impression that the motivation to do so is somewhat intrinsic, yet that this motivation is fostered by the high professional standards that are a part of the culture of this school. In speaking with the participants, it became apparent that all staff members at the school pride themselves on a job well done, or perhaps even a job done in such a manner that it exceeds expectations. Would it be possible for the principles of the RTI model to be implemented as successfully in a school where the culture was drastically different or required only that teachers do what is necessary? I believe yes, but that implementation in such a school would take more time and resources to ensure the principles were being applied with integrity and cooperation.

Implications at the School and Division Level

This research has identified that the participating school feels that the responsibility for the effective implementation of principles of their RTI model lies largely with the school staff. The participants described the staff members involved as enthusiastic, self-motivated, innovative and engaged. These are staff members that are willing to go the extra mile to provide meaningful and quality educational opportunities for their students. This often requires many hours spent outside of the workday researching, planning, discussing and organizing program materials. These staff members not only maintained the highest standards of professionalism, but went beyond what was

expected of them. It seems that the level of engagement demonstrated by the staff at the participating school was a matter of not only professional pride, but personal pride, as well. While staff members were not expected to use personal time to conduct professional business, the staff at the participating school did so. These are staff members that were willing to collaborate and learn from one another, and to give up “old” and “comfortable” teaching practices to ensure their students would be provided with a level of instruction that was appropriate for their unique strengths and weaknesses. As well, the school was willing to allocate a great deal of their professional development hours and funding for the implementation and maintenance of their model. The undertaking of a similar RTI model in another school is certainly feasible, and if done in a gradual manner with specific long-term goals and with a certain level of adaptability, they, too, may be successful.

The participants identified that the school division seemed to be currently more supportive. Access to division-based personnel such as psychologists, occupational therapists and speech and language pathologists was a key feature of the school’s model, and was also an area the school identified as a potential roadblock to the effectiveness of their model because access can be limited. The division provided access to pertinent professional development opportunities and has committed to providing quality services for students and staff members. If considering supporting other schools in implementing an RTI model the participating school division may wish to continue to ensure that their professional development opportunities align with RTI goals. As well, the division may wish to invest in division-based resources such as universal screening and progress monitoring tools that are evidence-based and available to all interested schools.

Limitations and Delimitations

As this research was a case study, it is based on a small sample of participants and it is limited to their experiences. This makes generalizability impossible; however, the strength of such a small sample is the opportunity to concentrate on achieving depth and detail from a few research participants. Exploring the breadth of the participants' experiences in rich detail is not feasible with a large sample pool.

For feasibility purposes, the study was delimited to the experiences of only three teachers from the participating school: an administrator, a classroom teacher and the special education teacher. Each participant was chosen for very specific reasons: the administrator because of the role they play in making programming decisions and choosing when and how much professional development in which to participate; the special education teacher because they play a key role in the development of classroom interventions and in the delivery of the more intensive tiers of intervention, as well as the support of teachers in working with struggling students; and thirdly, the classroom teacher who was responsible for initiating the program and plays a critical role in the day-to-day implementation of RTI strategies. Each of these individuals makes a significant, yet different, contribution to the implementation of principles of RTI. Their experiences provide valuable insight into what makes this school's model effective.

The school demographics could also be seen as a potential limitation of this study, as there were only thirty-four students participating in the cross-grade reading groups at the time the research was conducted. Within that population, twenty-six were in the green zone, five were in the yellow zone and three were in the red zone. A larger pool of

students may have provided further insight in the necessities and challenges of implementing the principles of RTI when there is greater diversity in the level of need and intensity of support required.

Personal growth

Part of my purpose in conducting this research was to identify ways in which I may be more effective as a psychologist within a school system that is trying to implement principles of the RTI model and how I can support schools in their implementation of the model. I've learned that a greater part of my time could be spent as a consultant. Built into this time should be time to consult around specific students, but also around common learning profiles and how to best support students with a similar profile. By providing this type of consultation, I can assist in building capacity in the teachers and educational associates supporting the yellow and red zone students. I can also work cooperatively with other support staff, such as occupational therapists, school counsellors and speech-language pathologists. Ideally we could cross-collaborate on students on our case loads to implement interventions in the most timely manner possible.

I also learned it is important for me to be accessible to the schools that I support. While it is important for a system to be in place that supports this accessibility, I don't want it to be overwhelming or confusing for my schools and the teachers with whom I work. I want to be approachable, so that teachers feel comfortable coming to me with questions around a learning profile or intervention and in giving me feedback when I have provided consultation or assessment. Essentially, I would like to be integrated in the cooperative teaching teams that exist at the school level. This team includes,

administrators, special education and classroom teachers, educational associates and other itinerant staff like occupational therapists, speech-language pathologists and school counsellors. The work these individuals do is invaluable, and I hope to contribute in a similar manner. While I would not be on-sight every day, I would still hope that teachers and parents would perceive me as a part of the team.

Future Directions for Research

This research indicates that there are a great many opportunities for future study within this subject area. It would be worthwhile to investigate the decision-making process for tier placement; to learn exactly how the participating teachers choose which tier to place a student within. Also, how did they develop the criteria for each tier, and what is the evidence-base for the screening and progress monitoring tools they use? Another area requiring future research is the means by which the school might establish whether or not a student has a learning disability before allowing them to progress through each tier. The RTI model has received some criticism of its diagnostic validity for identifying learning disabilities (Kavale, 2005; Mastropieri & Scruggs, 2005). Some researchers believe the RTI model is useful as a first step in the identification of learning disabilities, but criticize that this step is only achieved at the end of the RTI process when the student fails to respond to intensive intervention. This can be a lengthy process, which, at its completion, does not provide adequate information upon which to base a diagnosis (Kavale, 2005). Students may fail to respond to intervention for a wide variety of reasons, and the RTI model does little to differentiate between a student with behavioural or emotional concerns, a student with an attention-mediated deficit, a student

with general low achievement and a student with a learning disability (Mastropieri & Scruggs, 2005). Further research is needed to identify a system by which schools may identify students as at risk for a learning disability early-on in the RTI process.

Further research regarding the type of professional development utilized would also be beneficial. What makes these learning opportunities most applicable and practical? What suggestions might the participating school have for developing future learning opportunities for teachers? What resources are necessary for implementing this training and how often do they suggest participating in PD? The participants identified several types of professional development they found useful in their implementation of RTI principles. Specifically, they took advantage of division-based in-services on the use of data walls; on-going professional development in the area of guided reading and; perhaps most useful to their model, the shared reading and discussion of several books and tools providing guidance on the implementation of RTI principles to improve student reading. Occasionally all the teachers involved were able to attend professional development together, at other times one or two staff members attended and then presented their learning to their co-workers. The participating school made use of a gradual implementation of the RTI principles, spread out over the course of several years. Further research regarding the feasibility of a less drawn-out program plan is necessary as well.

The participants indicated that time was of the utmost importance when implementing changes such as those within the RTI model. While they found time by making use of professional development time and specific time allotted for learning

communities, how else might time be found for such an undertaking? Another potential area of study might be to explore the creative ways in which schools identify opportunities and make use of time during program implementation.

Summary

Over the course of this case study, three themes emerged as integral attributes of the participating school's RTI model: tiered intervention; assessment practices; and division-based supports. Seven other themes emerged as factors or conditions that contribute to the effective implementation of these attributes. In this chapter, each of the ten themes was placed within the research and also within Michael Fullan's four variables that influence the effectiveness of program implementation. As well, the limitations and delimitations of the research were described. Finally, the chapter discussed several areas of potential future research.

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Appendix A

Initial Interview Questions:

- What role do you see Response To Intervention as playing in your school?
- What principles of Response To Intervention do you see as key to its effective

implementation in your school?

- What results can be attributed to the implementation of Response To Intervention?
- Where did implementation of these components of Response To Intervention initiate in the school?
- Please describe any training or professional development you've undergone around Response To Intervention.
- Who is involved in the effective implementation of the components of the Response To Intervention model?
- What do you do to implement the Response To Intervention principles?
- What role does the psychologist play in the implementation of the principles of Response To Intervention in your school?
- What components of the RTI model do you deem as most essential in the identification of and intervention for learning-disabled students?
- What makes these components effective in your school?
- Please describe a positive experience you've had with principles of the Response To Intervention model.

Appendix B

Follow-up Interview Questions

- From your perspective, how have the principles of RTI helped you identify students who are struggling or who may have a learning disability?
- In your role as principal, what were/are the road blocks to implementing the principles of RTI, and if you were able to work around them, how did you do so?
- If you could wave a magic wand and make anything possible for your model, what would you do?
- With so many programs and strategies out there, how do your teachers decide which interventions to use?

Appendix C: Participant Consent Form
Department of Special Education, School and Counselling Psychology
College of Education

Project Title: Implementation of the principles of Response to Intervention: One school's construction of educational supports

Researcher(s):

Alana Wilson, M.Ed. Candidate, School & Counselling Psychology
Department of Special Education and Educational Psychology
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306-230-6008

Supervisor:

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Purpose(s) and Objective(s) of the Research:

- The purpose of this research is to explore how one school has successfully implemented the principles of the Response To Intervention Model.

Procedures:

- This is a qualitative study. The methodology is that of an instrumental case study. The primary source of data collection will be semi-structured, informal interviews with individual participants. Interviews will take place in the school and will last no longer than an hour. A minimum of one and a maximum of two interviews will be conducted with each participant. Interviews will take place on a date and time that is mutually agreeable for the researcher and participant. Interviews will be recorded via digital recorder and then transcribed. Transcripts will be provided to participants so that they may review, revise, clarify or discard any data prior to its use in the research. Data will be analyzed using thematic analysis, and the final report will be a narrative description of the themes identified.
- Please feel free to ask any questions regarding the procedures and goals of the study or your role.

Funded by: Social Sciences and Humanities Research Council of Canada (SSHRC)

Potential Risks:

There are no known or anticipated risks to you by participating in this research

Potential Benefits:

- Currently, our Ministry of Education espouses the use of the principles of Response to Intervention in Saskatchewan schools, however it does not provide guidance as to how to implement, provide training in and maintain the model in a school. As such, the methods used for implementation may vary a great deal from division to division, and even from school to school. Your school has been recommended as a school that has implemented these

principles effectively and efficiently. By examining how and why your school has implemented the principles of RTI, we can begin to identify ways in which other schools can do the same. Effective implementation will improve the quality of education and support services that students who may be struggling and students with Learning Disabilities receive across the division and perhaps even further.

Confidentiality: (see consent guidelines section 9)

- Identifiable demographic information will not be used in this study. For example, it will not be known what grades your school serves, outside of the understanding that it is an elementary school. Nor will the number of staff members, location of the school or the specific school population be disclosed.
- Pseudonyms will be used to protect the identity of the participating school and individual participants.
- Access to research data will be restricted to me and my supervisor, Dr. Tim Claypool. Digital files will be kept on a password protected personal computer and individual files will be password protected and encrypted. Hard copies of files will be kept in a locked cabinet. Data will be stored for five years after which time it may be destroyed via shredding and/or deleting the digital files.
- **Storage of Data:**
 - Access to research data will be restricted to me and my supervisor, Dr. Tim Claypool. Digital files will be kept on a password protected personal computer and individual files will be password protected and encrypted. Hard copies of files will be kept in a locked cabinet. Data will be stored for five years after which time it may be destroyed via shredding and/or deleting the digital files.

Right to Withdraw:

- Your participation is voluntary and you can answer only those questions that you are comfortable with. You may withdraw from the research project for any reason, at any time without explanation or penalty of any sort.
- Whether you choose to participate or not will have no effect on your position [e.g. employment, class standing, access to services] or how you will be treated.
- Should you wish to withdraw, please inform Alana Wilson. Any and all data collected as a result of your participation will be destroyed and cannot be included in the final narrative report.
- Your right to withdraw data from the study will apply until data has been pooled and thematic analysis has begun. After this date, it is possible that some form of research dissemination will have already occurred and it may not be possible to withdraw your data.

Follow up:

- To obtain results from the study, please contact either Alana Wilson or Dr. Tim Claypool at the number or email address provided above.
- **Questions or Concerns:**
- Contact the researcher(s) using the information at the top of page 1;
- This research project has been approved on ethical grounds by the University of Saskatchewan Research Ethics Board. Any questions regarding your rights as a participant may be addressed to that committee through the Research Ethics Office ethics.office@usask.ca (306) 966-2975. Out of town participants may call toll free (888) 966-2975.

Continued or On-going Consent: :

- Should a follow-up interview be requested by the researcher, the requirements of informed consent will be reviewed at that time. It will not be necessary to sign another consent form so long as the conditions of consent have not changed. If the conditions of consent have changed, the researcher is required to carefully review these changes in writing with each participant. Should the participant choose to continue participating in the research, a new consent form must be provided and signed.

Option 1 - SIGNED CONSENT

Your signature below indicates that you have read and understand the description provided; I have had an opportunity to ask questions and my/our questions have been answered. I consent to participate in the research project. A copy of this Consent Form has been given to me for my records.

Name of Participant	Signature
Researcher's Signature	Date

A copy of this consent will be left with you, and the researcher will take a copy

Appendix D: Document and Transcript Release Form

University of Saskatchewan

College of Education

Department of Special Education and Educational Psychology

School and Counselling Psychology

Data/Transcript Release Form

I, _____
have reviewed the complete transcript of my personal interview in this study, and have been provided with the opportunity to add, alter and delete information from the transcript as appropriate. I acknowledge that the transcript accurately reflects what I said in my personal interview with Alana Wilson. I hereby authorize the release of this transcript to Alana Wilson, and her research supervisor, Dr. Tim Claypool, to be used in the manner described in the consent form. I have received a copy of this Data/Transcript Release Form for my own records.

Name of Participant: _____ Date: _____

Signature of Participant: _____

Signature of Researcher: _____

Appendix E: Recruitment Letter

Dear

My name is Alana Wilson, and I am in the process of completing a Master's degree in School and Counselling Psychology at the University of Saskatchewan. An essential component of my studies is the completion of a thesis. I have chosen to research a school within your school

division that has effectively implemented the principles of the Response to Intervention model. Specifically, my research is based on the following questions:

- 1) What factors or conditions contribute to the effective implementation of the principles of the Response To Intervention Model?

- 2) What components of the model does the school identify as being effective and key in their implementation of the principles of the Response to Intervention Model?

Your school has been suggested by learning support services staff as having effectively implemented the principles of the Response to Intervention model. I would very much like to make your school the topic of this instrumental case study. In participating in this study, your school may serve as a model for similar schools seeking to implement the principles of RTI. It may also inform the practice and collaboration of learning support professionals within your school division. My primary method of data collection will be via semi-structured, informal interviews with a minimum of two and a maximum of three participants. Ideally, I would like to interview the school principal and special education resource teacher. Review of pertinent documents will be a secondary source of data collection.

As much as possible I will safeguard the confidentiality of your school through the use of pseudonyms and by omitting identifiable demographic information. As well, should you choose to withdraw at any time, you may do so without repercussion and all data collected will be discarded. Participation in this study is completely voluntary in nature. This study seeks to celebrate the success your school has had identifying and intervening on behalf of students who may be struggling and the means by which you collaborate with professional support staff.

I look forward to your reply,

Alana Wilson
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