Theory to Practice: Implementation Achievements and Challenges of Response to Intervention in a Rural District

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Abstract

Implementation of Response to Intervention (RTI) has been developed with the goal of increasing the efficiency and efficacy of the identification process for students at risk of/with learning disabilities. While this goal is well-intentioned, the implementation of RTI has faced challenges at the district level. Understanding the current implementation practices of RTI within school districts can provide insight into how the theory and goals behind RTI are being interpreted, thus providing evidence for the benefits of implementing RTI as well as uncovering the challenges that district face as they implement this pre-referral model. The purpose of this mixed methods study w to examine how RTI is translated into everyday implementation across elementary and intermediate schools. Findings suggest that achievements occurred within the culture, however, inconsistencies and misunderstanding of RTI lead to the misimplementation of components within the model. Implications for research and practice are further discussed.

Keywords: Response to Intervention, teacher development, in-service teachers, mixed methods

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With the re-authorization of IDEA in 2004 and the option for states to use multi-tiered preventative approaches to instruction and identification of students with learning disabilities, Response-to-Intervention (RTI) models began to be implemented across the US (Fuchs & Vaughn, 2012). Although the practices in RTI models are similar (e.g., universal screening, progress monitoring, data-based decision making) and the components of the model are essentially the same (e.g., Tier 1, Tier 2, Tier 3) the implementation of RTI varies across schools (e.g., types of interventions, data-based decision making; Gandhi, Marx, Kuchle, Lemons, & Wehby, 2016; Nichols, Castro-Villarreal, & Ramirez, 2017). Foundational research on RTI provides direction for professionals on many of the effective practices included in an RTI model, such as screening and progress monitoring. Studies have also offered critical information on the components of RTI including effective movement of students from one tier to another. Although

this is the case, there continues to be a need to research that explores the ways school implement these practices and components. More specifically, there is a need to understand explore teachers' and administrators' understanding of RTI, assessments of their school district's implementation of RTI, and also their needs and desire for professional development. Understanding how RTI is being translated and digested by schools can more fully inform educators and leaders on how to effectively implement RTI (O'Connor & Freeman, 2012) and highlight areas for future research. Therefore, the purpose of this study was to examine the implementation of RTI, in a rural district, in order to better understand how the RTI model is translated into everyday implementation across different school levels.

School Implementation

Studies have shown that schools struggle with implementing the progress-monitoring component of RTI (Compton, Fuchs, & Fuchs, 2006; Compton et al., 2010) and conducting data based decision-making (Van Geel, Keuning, Visscher, & Fox 2017). Research on the assessment and progress monitoring components in RTI models has revealed confusion among educators about the purpose of RTI, the strategies used in the implementation of RTI, and also educators' lack of preparation and professional development related to RTI (Cavendish, et al., 2016). Other research has focused on the school level implementation of RTI resulting in clear needs for more research on fully implemented RTI models (Denton, 2012) and "assessing readiness and capacity" for implementation (Arden et al., 2017, p. 271). Fuchs and Fuchs (2017) examined the results of a national evaluation of RTI school practices and concluded among other things that schools face challenges in implementing RTI and are perhaps not providing interventions that are research-based. Gersten, et al. (2017) provide additional analysis of RTI noting limitations and calling for more field evaluations in which districts "take a serious look at current RTI practice and evaluate its impact" (p. 252).

Similarly, O'Connor and Freeman (2012) discuss the importance of an effective coordination and decision making at the district level, in order for RTI to stay focused and become sustainable. Their research found that in over 20 Midwestern school districts, sustainable and successful RTI implementation was due to key district level factors. Consistent with research about "highly effective schools" (e.g., Levine & Lezotte, 1990; Togneri, 2003), implementation of RTI at the district level should focus on: a) assessment and data-based decision making, b) beliefs and culture, c) educator recruitment and preparation, d) appropriate resource allocation, and most importantly, d) leadership. Their recommendations state that leadership and their support at the district-level are most important in an effective RTI model.

It is important to note, that the implementation of RTI is a paradigm shift in education reform (O'Connor & Freeman, 2012), as educators recognize that RTI is not a program, but rather a process in which educational decisions are made. Although the components of the RTI model should remain the same (i.e., the use of evidence-based practices, tiered implementation, data-based based decision making, and progress monitoring), by design, RTI does not conform to any specific model or manner of implementation for each component. Instead, it allows each school and district to implement their own unique model in order to autonomously support their student population. Within this paradigm shift, barriers and challenges of the implementation of the model often noted by educators and administrators.

Challenges and Barriers in the Implementation of RTI

With RTI being a whole-school change, educators have also expressed concerns in its implementation as a school-wide system or model. For example, Dulaney (2013) and Stuart, as well as Rinaldi, and Higgins-Averill (2011) found that teachers are concerned on how RTI teams consider the *how, who, and what* in the implementation of RTI and each of its components (i.e., progress monitoring, evidence-based interventions, data-based decision making). Similarly, concerns about school-wide collaboration (Werts & Carpenter, 2013), lack of clear responsibilities and roles (Isbell & Szabo, 2014), inadequate professional development or training (Castro-Villareal et al., 2014), and lack of resources provided by the school district, were often barriers expressed by educators when implementing RTI. In addition, rural school districts face additional challenges such as remote location and personnel shortages (Author et al., 2017).

Similarly, findings from the study by Cavendish et al. (2016), suggest that teachers' preparation for and their practices in implementing RTI indicate that although both general and special education teachers lack understanding of RTI, they do have the desire for professional development on RTI, and could benefit from coaching (Arden, et al. 2017; Ciullo et al., 2016; Nichols, et al. 2017). Beyond the issue of preparation, there is a call from researchers for continuous and intensive professional development for educators to effectively implement RTI (Fuchs & Vaughn, 2012).

Finally, one of the largest challenges in the implementation of RTI is observed across grade levels. The literature has historically focused on the implementation of the model at the elementary level (Fletcher, Lyon, Fuchs, & Barnes, 2007; Vaughn & Fletcher, 2012). Although research on secondary education has been conducted, mixed outcomes of its implementation have been noted. The differences lie in the implementation models as it relates to the focus of the model. For example, in the early grades, screening for academic difficulties is one of the main foci when at the middle and high school levels, academic difficulties have already been established (Fuchs, Fuchs, & Compton, 2010; Vaughn & Fletcher, 2010). Therefore, allocation of resources may be different as preventative measures are the main focus at the elementary level (e.g., Tier 1 and Tier 2) and remediation or targeted interventions (e.g., Tier 2 and Tier 3) to close gaps are the focus at the secondary level. Nevertheless, most of the challenges of implementation of the model are present across all educational levels.

Concerns-Based Adoption Model

Consistent with exploring the current state in which an innovative model (e.g., RTI) is being implemented in schools, the Concerns Based Adoption Model (CBAM) is a theoretical framework that helps explore the phenomenon of implementation but also guides recommendations for professional development if necessary. CBAM is based on the assumption that change within an educational setting or practice is an ongoing process that is grounded in the beliefs, behavior, and attitudes toward this change by an individual (e.g., teachers, administrators, specialists) (Hall & Hord, 2011). Research using this theoretical framework has provided clear findings when using it to explore changes in policy, implementation of innovation, as well as guiding professional development.

Researchers have used CBAM as a framework to better understand educators and other school professionals' concerns regarding the implementation of RTI (e.g., Author et al., 2014; Bogue, Marrs, & Little, 2017; Isbell & Szabo, 2014; LaRocco & Murdica, 2009; Tiffany, Melton, Little, Marrs, & Bogue, 2014). In this case, RTI as pre-referral model is a change within the educational practice to support students who are struggling or for the identification of students to receive special education services. Therefore, it is important to observe and understand the stakeholders' personal experiences affect this change in order for RTI to be sustained as a desired model or innovation (Burns, 2007; Hall & Hord, 2006; 2011).

Purpose of the Study

Implementation of Response to Intervention (RTI), or other pre-referral models, has been developed with the goal of increasing the efficiency and efficacy of the identification process for students at risk of/with Learning Disabilities (LD). While this goal is well-intentioned, the implementation of pre-referral models such as RTI have faced challenges from teachers due to their concerns about their ability to implement such process without proper professional development (Author et al., 2014), in addition to challenges due to their rural location (Author et al., 2017). Understanding the current implementation practices of RTI within school districts can provide insight into how the theory and goals behind RTI are being interpreted, thus providing evidence for the benefits of implementing RTI as well as uncovering the challenges that district face as they implement this pre-referral model across different grade levels. The purpose of the current exploration into RTI implementation was to examine how the RTI model is translated into everyday implementation at a local school district. Of specific interest is the comparison between teachers at the elementary and intermediate levels in their knowledge, concerns and importance, as differences between these two levels could provide evidence that RTI implementation at these levels are systematically different. We first provide a descriptive summary of the implementation of Response to Intervention (RTI) within a rural district's elementary and intermediate schools and then provide a discussion including recommendations for practice and research. The following questions guided the exploration: 1) How is a large, rural, and diverse school district implementing RTI in its five elementary schools and two intermediate schools? 2) How do elementary and intermediate teachers across the district rate their level of knowledge, concerns and perception of importance related to RTI and do elementary and intermediate teachers differ in their ratings? 3) What are strategies that support teachers and staff in their implementation of RTI in each of the district's five elementary schools, and two intermediate schools? and 4) What are barriers that limit teachers and staff in their implementation of RTI in each of the district's five elementary schools and two intermediate schools?

Methods

Research Design

Sequential mixed-methods research design (Teddlie & Tashakkori, 2009) was used to explore a large school district's implementation of RTI. Through a survey, quantitative data was collected to better understand the overall implementation of RTI, including the teachers' and staffs' understandings of RTI, and the similarities and differences in implementation across the schools in the school district. In a sequential manner, survey results (quantitative data) were analyzed first then the results guided the qualitative data collection phase. Through the use of focus groups and interviews (qualitative data), further exploration of these topics as an overarching

phenomenon was sought using thematic analysis. After all data were collected and analyzed, meta-inferences (Teddlie & Tashakkori, 2009) were made in order to answer the research questions in a holistic manner.

Participants

Convenience sampling, through the district's list-serv of 647 staff, was used to gather information regarding the implementation of RTI practices, due to the the sequential mixed-method design which included both quantitative and qualitative data collection and analyses our participants are separated into two overlapping samples: (1) those who responded to a district-wide survey; and (2) those who volunteered to participate in either a focus group or interview.

Survey Participants. Participants who responded to a district-wide survey included 139 certificated, non-administrative, staff from a rural school district in the Northwest part of the U.S. during the 2016-2017 school year. Participants who responded to the district-wide survey were mostly female (71%; n = 99), mostly white (89%; n =124), and had on average 15 years of experiences (M = 15.43; SD = 10.14). Of these individuals, the majority identified as working primarily with students in grades K-4 (53%; n = 73), while 23% (n = 32) reported working primarily with students in grades 5-7, 9% (n =12) reported working primarily with students in grades 8-12, and 16% (n = 22) reported "other" or did not respond. About two-thirds (n = 89; 64%) of the respondents indicated that they were general education teachers, 12% reported that they were support staff (e.g., instructional assistants), 6% reported that they were administrators, 4% reported that they were special education teachers, and 9% reported "other" or did not respond. Respondents represented 21% of the total staff within the school district (n=211), which provides a sampling error rate of +/-7 at the 95% confidence level (Dillman, 2009).

Focus Group and Interview Participants. We implemented a systematic focus group process (Krueger & Casey, 2015). We recruited participants for our focus groups and interviews by using a purposeful sampling approach wherein general education teachers, special education teachers, and school and district administrators were identified to participate in focus groups or interviews from each of the five elementary schools and two intermediate schools within the district. These individuals were contacted and organized directly through the district office, and identified by members of the district executive team (e.g., superintendent, director of elementary education, and director of special education) to meet the requests of the researchers that the groups consisted of teachers and administrators with varying levels of experiences, and roles in the schools (i.e. principal, general education teacher, special education teacher, etc.). Our final sample consisted of 55 instructional or administrative staff from each of the five elementary schools and two intermediate schools within the district of focus, each of whom participated in one of eight focus groups or six interviews. Of the 55 participants, 49 were included as focus group participants and the remaining six were interviewed one-on-one.

There were 26 general education teachers who participated in one of four focus groups that included only other general education teachers. General education teachers were the largest group of focus group participants, and there were two focus groups for general education teachers who taught at an elementary level (n = 14) and two focus groups for those who taught at an intermediate level (n = 12). In additional to general education teachers, 14 of the 49 focus group participants were either special education teachers, school counselors, or school

psychologists. These individuals also participated in one of two focus groups that included only other individuals working as special education teachers, school counselors, or school psychologists; one focus group for those working in an elementary school (n = 7), and the other for those working in an intermediate school (n = 7). We also conducted two additional focus groups, one with a team of K-7 districtwide RTI coordinators (n = 4), and the district executive team (n = 5). The remaining six individuals who participated in interviews were school principals from within district.

Instruments

Survey. To assess teachers' and other district level instructional staffs' knowledge, concerns, and perceptions related to RTI, we began our exploration with an online survey. The survey was a modified version of the Knowledge of RTI (Kaplan, 2011) assessment. The Knowledge of RTI survey was originally designed to assess school psychologists' perceived knowledge of and concerns about RTI practices, the perceived barriers and opportunities, as well as factors that encourage school psychologists' involvement in the implementation of RTI. In its original form results produced were reliable and valid with internal consistency measures ranging from .64 to .84, and evidence for content validity gathered through subject matter experts reviewing each question (Kaplan, 2011). Participants rated the items, five questions for knowledge, six for concern and four for importance, from one to five, with five indicating high knowledge, concern, or importance and one indicating low knowledge, concern or important. For example, one statement asked participants to rate their knowledge of how to monitor student progress. Adaptations to this instrument were made in order to target the specific population (i.e., teachers). Results from our modified version of the survey were internally consistent (α = .93, .83 and .88 for knowledge, concerns, and importance, respectively).

Focus group and interview protocols. Guided by the results from the quantitative data (i.e., survey) collection and analysis phase of the sequential mixed methods, focus group and interview protocols were developed in order to further explore our research questions. A total of 18 questions for each of the three stakeholder groups (teachers, RTI coordinators, and administrators) were developed. After the questions were developed, we narrowed them down to six core questions and nine supplemental questions. These decisions were based not only on further exploration of the survey data, but also current research, the literature on RTI, and our experiences with the implementation of the RTI model.

Data Analysis

Quantitative. Descriptive statistics including means and standard deviations were calculated to provide an overview of teachers' and instructional staffs' knowledge, concerns, and importance of RTI. In addition, to determine if differences exist in these perceptions between elementary and intermediate teachers/staff a Multivariate Analysis of Covariance (MANCOVA) was conducted with level of school (elementary versus intermediate) as the independent variable and participants' rating of knowledge, concerns, and importance as the dependent variables. To account for variations that may exist due to teaching experience, years of teaching was entered as a covariate.

Qualitative. We followed a systematic approach for the analysis of focus group data, that began at the level of data collection, by listening to common and uncommon statements, and asking for

further information (Krueger & Casey, 2015). The teams took field notes during the group interviews, documented important information/themes on poster paper during the focus groups, and audio recorded the focus groups. Immediately following the focus groups and interviews, the teams met individually to analyze the data they collected and begin unit analysis of themes (Berg, 2001). Continued analysis occurred later with the researchers immersing themselves in the data, to inductively identify patterns and themes. In addition to using content analysis (Berg, 2001), the teams conducted further thematic analyses (Braun & Clarke, 2006) to analyze the qualitative focus group and interview data. Themes were selected through an inductive manner in which two different coders combed through the data and built themes from similarities. Then as a group, all researchers came together to build the final themes and check on overall agreement. A total of six researchers with expertise and doctoral degrees in special education, educational psychology, and teacher preparation collected and coded the data. Five out of the six researchers had classroom teaching experience, and three of the researchers had experience working in an RTI model or its components as part of their research in schools.

Results

Survey

In total, we received valid responses from 139 participants. Of these respondents, 52% reported working in a K-4 setting, 23% in an intermediate school, 1% in a junior high, 7% in a high school, and 16% were "other" or did not report. About two-thirds (66%) of the respondents indicated that they were general education teachers, 12% reported that they were support staff, 5.7% were administrators, 4.3% were special education teachers, and 9.3% reported their position in their school as "other." Means and standard deviations for participants' responses to the survey are reported in Table 1.

Table 1.
Means and Standard Deviation for Knowledge, Concerns, and Importance by Teaching Level

Perception	Elementary	Intermediate	Total
Knowledge			
Selecting evidence based practices	3.69 (0.78)	3.28 (0.97)	3.47 (0.91)
Implementing Evidence based practices	3.71 (0.77)	3.26 (0.98)	3.47 (0.92)
Making data-driven decisions	3.96 (0.80)	3.53 (0.90)	3.76 (0.92)
Monitoring student progress	4.00 (0.68)	3.70 (0.83)	3.84 (0.81)
Identifying students who are struggling	4.14 (0.62)	3.74 (0.87)	3.94 (0.77)
Total Knowledge	3.90 (0.65)	3.61 (0.70)	3.78 (0.68)
Concerns			
Time needed to implement	2.94 (1.12)	3.62 (0.97)	3.21 (1.10)
Resources needed to implement	2.64 (1.21)	3.53 (1.13)	2.96 (1.17)

Colleagues attitudes towards RTI	2.03 (1.03)	2.57 (1.22)	2.28 (1.17)
Limited knowledge on how to implement	1.90 (0.95)	2.68 (1.20)	2.24 (1.15)
RTI outcomes don't align with my expectations	1.88 (1.05)	2.28 (1.19)	2.09 (1.14)
Students attitudes towards RTI	1.55 (0.86)	2.43 (1.22)	1.96 (1.11)
Total Concerns	2.18 (0.71)	2.79 (0.80)	2.41 (0.79)
Importance			
Increasing my colleagues knowledge of RTI	3.36 (1.04)	3.70 (1.08)	3.41 (1.05)
Skills to better incorporate RTI in my teaching	3.57 (1.03)	3.60 (1.09)	3.52 (1.11)
Increasing district support of RTI	3.83 (1.07)	3.96 (1.12)	3.87 (1.09)
Increasing my own knowledge of RTI	3.47 (1.02)	3.53 (1.01)	3.55 (1.06)
Total Importance	3.59 (0.87)	3.65 (0.92)	3.61 (0.88)

Note: Standard deviations in parenthesis.

When asked to rate their level of knowledge on five key components of RTI, respondents reported being most knowledgeable about identifying students who are struggling, monitoring student progress, and making data-driven decisions, however, they felt that less knowledgeable about selecting and implementing evidence-based practices. With respect to participants' concerns of RTI implementation, participants overwhelming reported that having enough time to implement RTI was their biggest concern, followed by closely by having enough resources. Respondents reported being least concerned about students' attitudes towards RTI and RTI outcomes not aligning with their expectations. Lastly, participants were then asked to rate the importance of four potential supports for improving the implementation of RTI. Overall, participants rated "increasing district support of RTI" of RTI as the most important potential support, followed by developing skills to better incorporate RTI into their teaching.

The MANCOVA was conducted to assess teaching level differences on three perceptions of RTI: knowledge, concerns, and importance. A non-significant Box's M test ($p = .84$) indicates homogeneity of covariance matrices of the dependent variables across the different levels of teaching. The multivariate effect, after accounting for differences associated with teaching experience, was significant by teaching levels, F (3,106) = 7.49, $p < .01$, partial $\eta 2 = .08$. Univariate tests showed that there were significant differences in elementary and intermediate teachers' and instructional staffs' knowledge of RTI, F (1,108) = 4.41, $p = .03$, partial $\eta 2 = .04$, with teachers and instructional staff at the elementary level reporting higher levels of knowledge ($M = 3.90$, $SE = 0.08$) than teachers and instructional staff at the intermediate level ($M = 3.62$, $SE = 0.10$). Significant differences between levels were also observed in teachers and instructional staff level of concern, F (1,108) = 17.37, $p < .001$, partial $\eta 2 = .14$, with results suggesting that

teachers and staff at the elementary level (M = 2.18, SE = 0.09) had lower levels of concern with RTI than the intermediate level teachers and staff (M = 2.80, SE = 0.11). No significant differences were seen between levels in rating the importance of RTI, with all teachers and instructional staff reporting high levels of importance for different components of RTI.

Focus Groups and Interviews

Information from the online survey as well as the on-site focus groups and interviews provided the foundation for a series of findings and themes. A primary finding from the focus groups and interviews was that RTI was being implemented at some level within each school, however, the level of implementation was varied across all schools and more importantly within all schools there was a common misunderstanding of the purpose and process of RTI.

A total of four main themes emerged from the focus group and interview data: a) *Understandings of the RTI Model,* b) *Students*, and c) *Collaboration*. Each overarching theme represents a more in depth understanding of the quantitative results. Therefore, specific examples and explanations accompany each one of the themes next.

Common understandings of the RTI model. One of the most important themes that emerged from the survey and the focus groups was the common understanding of RTI. More specifically, results from the survey provided evidence that some teachers and staff had a good understanding of RTI but also that others misunderstood RTI, including its rationale, foundation, background, components, and implementation. Two main sub-themes emerged from these data: a) Common understandings and b) Common misunderstandings.

Common understandings. Implementation of components of RTI were evident. Some teams and individual educators used data-driven decision-making to provide support and move students from tier to tier in the appropriate amount of time suggested by research (i.e., 6-9 weeks per intervention cycle). For example, in one focus group a special education teacher stated "We have child study team meetings. This year we are really focusing on seeing what teachers already tried in their classroom and then we see what intervention we can try through RTI…we are making sure we try intervention for 4-6 weeks." Progress monitoring seemed to be consistent across some schools and grade levels, although each implemented progress monitoring in a different way. For example, in one focus group a general education teacher stated "we have two major assessments, so we use our classroom basis assessment ……. and that's how we group our kids and help us also look at specific skills they might be needing. And then, we just reevaluate often, monthly for the CBAs." Overall, the use of screeners and assessments were consistently administered across the district. The patterns across focus groups were similar in terms of common understandings of RTI, however the special education and specialist groups seemed to have a more in-depth understanding.

Common misunderstandings. Results of the survey indicated that the school personnel had moderate to high understanding of RTI and its implementation. Contrary to this finding, the thematic analysis and the subsequent comparison of the focus group data showed evidence that there were many misunderstandings or lack of knowledge about the implementation of RTI. For example, teachers, administrators, and specialists equally used re-teaching the core curriculum as a Tier 2 intervention, when throughout the literature and research about RTI, Tier 2 should be

focused on providing small-group targeted interventions (National Center on Response to Intervention, 2017). Because of this, Tier 3 interventions at this school district included small group moderate interventions, rather than the intensive, individualized evidence-based interventions that the literature discusses. In addition, there was a lack of clarity or understanding of the role of the RTI coordinator, the rationale and foundation of RTI, using the wait-to-fail method, and definition and implementation of the model from the district. As an RTI coordinator stated "the district doesn't have a clear understanding that RTI has different levels of group size for the different tiers of instruction" and another said "...unfortunately, our school doesn't know about the three tiers of intervention, about how we need a schoolwide team.... I believe our school desperately needs RTI, because without implementing the program correctly... it will lead to continuing chaos and further harm to students' learning needs." Finally an educator stated "there is no plan as a district to have us all on the same page as we funnel students from elementary to middle school and then on to high school.... there need to be ongoing, systematic training for all staff." In comparing focus group data, the inconsistencies in implementation of RTI seemed to be grounded at the level of the school, not at the focus group participant level. In other words, the school unit was a more important factor affecting implementation of RTI than if one was a special or general educator.

Students. One of the primary themes that emerged from comments from the qualitative data was the strong desire to meet the needs of all students within the district. For example, many teachers spoke to the transition in thinking from "my students" to "our students". In addition, teachers discussed in depth strengths and challenges in their implementation of RTI. An example of this sub-theme, *Reflection of Teaching Practices*, was when one teacher stated, "We are actively using RTI and meeting the needs of more kids than ever before but we are still struggling with assessing students." This statement provides further evidence that teachers were being reflective and understood they had more work to do.

Contrary to this notion of a common talk of "our students" from general education teachers and administrators, special education teachers and specialists suggested that this perspective may be limited to only those students outside of the special education system. In examining themes and patterns across focus group data (e.g., general education teachers, special education teachers, specialists) there were differences regarding their views of students. Specifically, the special education teachers' and specialists' focus groups did not hold the view that the schools thought of all students as "their students" but rather the consensus among the special education teachers and specialist was that students with disabilities "are thought of as separate and are not included."

Collaboration. Another theme that emerged from the data was the positive attitudes toward collaboration and the large occurrence of it throughout the school district. Guided by the survey results of 92% of participants stating that RTI applied to their roles or positions and a mean score of 3.76 indicating a moderate level of knowledge regarding data-driven decision-making, further explorations of the collaborative efforts from teachers, specialists, coordinators, and administrators were made during the focus groups and interviews. Some aspects that affected collaboration were evident in teachers and staff's discussions. One teacher said "Our building went whole-school with RTI. The specialists helped group kids across the school, but flexibility

diminished. We refocused on rich learning experiences for all kids, but this left little or no time for interventions."

While not directly mentioning collaboration, comments from the focus groups indicated a time constraint related to working together to provide interventions. Some of the comments focused on the confusion about who to collaborate with: "I wish RTI discussions could be more like PLCs. Who do I tell how RTI students are doing? Is our Tier 1 math resulting in 80% of students being at grade level/benchmark...I do not know." Those interviewed recognized there were pockets of greatness, but also pockets of weakness. One school had tried many different models and seemed to be stuck as to the next move. Teachers and staff said that there was no time built into the schedule to collaborate or provide Tier 2 interventions. The themes and patterns that emerged across focus groups regarding collaboration were similar, with all desiring to collaborate while recognizing the time constraints and the lack of direction about how collaborate in a RTI model.

Meta-Inference

According to Teddlie and Tashakkori (2009), a meta-inference is an understanding or conclusion developed through the integration of inferences from both quantitative and qualitative results. The meta-inference from this sequential mixed methods findings was that although educators and administrators in the school district were inclusive in thinking about all students and providing the best supports possible through an RTI model, there was overall confusion about the RTI model. Specifically, there were misunderstandings based on incorrect knowledge, lack of professional development, and variations across schools in the implementation of RTI, therefore, decreasing potential success. In other words, the findings show that educators in this district had the right mindset but not the knowledge to properly implement RTI.

Discussion

Overall, the studied school district implemented essential components of RTI, including data-driven decision making, progress monitoring, and universal screening, and multi-level prevention system. This showed that teachers, specialists, and other implementers have some common understandings of the RTI model. However, across the results of the study, there was evidence that there were misunderstandings about the implementation of RTI and its components. Although this is not uncommon in practice around the U.S. (O'Connor & Freeman, 2012), there was strong evidence that the knowledge and skills the school personnel had previously obtained needed further professional development and guidance for coherence and appropriateness of implementation of the RTI model and its components (Miller & Kraft, 2008; O'Connor & Freeman, 2012). There was a need to further enhance not only the skills and knowledge about RTI as a model for teachers and implementers, but also for administrators. In a follow up meeting with key administrators and teachers, several admitted to "having to learn more about RTI and its implementation" due to their erroneous understanding of it.

In addition, shifting from an individual classroom to a school-wide system can pose complications such as moving from "my students" to "our students" perspectives in order to support all students. Teachers discussed their strengths and weakness and often spoke of the desire to collaborate with each other. Collaboration is a critical component of successful

implementation of any RTI model (Bean & Lillenstein, 2012; Robinson, Bursuck, & Sinclair, 2013; Werts, Carpenter, Fewell, 2014). As RTI is a school-wide model, it is possible that most of the school personnel felt that they had some role to play in the implementation of RTI and seemed to feel invested. However, almost half of the survey responders indicated that they did not feel very knowledgeable about RTI or there was confusion about the definition and implementation of RTI model and its components, matching what other researchers have encountered (Author et al., 2014; Bogue, Marrs, & Little, 2017; Isbell & Szabo, 2014; LaRocco & Murdica, 2009; Tiffany, Melton, Little, Marrs, & Bogue, 2014). Therefore, recommendations for school administrators such be focused not only on the evaluation of their implementation of the model, but rather, ways in which the model can be improved through professional development focused on the implementation of evidence-based RTI components.

Limitations

There are a number of limitations that must be considered when interpreting the results of this study. First, the data that were collected for the purpose of this study represent only seven schools within a single school district in the Pacific Northwest and should not be generalized to be representative of other schools and districts within the region, state, or country. Furthermore, the data collected for this study were based on the self-reports of instructional staff who self-selected into participating in this study. Self-reported data are known to have numerous threats to validity, including response bias, which refers to tendencies in how individuals respond to particular questions that are not necessarily related to evidence (e.g., over- or under- inflation). Therefore the results of this study should be interpreted with these limitations in mind and be the foundation for future studies which can further explore the implementation of RTI in schools.

Implications for Research and Practice

Research

Based on the continued findings of teachers, administrators, and entire school districts struggling to implement RTI based on evidence-based components and models, it is imperative that further exploration and evaluation at the micro (e.g., teacher, school) and macro (e.g., school district, state-wide) levels are conducted. More specifically, partnerships between universities or research centers could lead to better alignment and bridging research to practice consistently across schools and school districts (Sandholtz, 2002), especially when school districts do not have enough resources for professional development (Garet, Porter, Desimone, Birman, & Yoon, 2001). Moreover, following theoretical frameworks such as CBAM, administrators could use the collected data to guide their professional development as well as targeted funding based on needs, concerns, and current implementation of the RTI or other innovative models (Author et al., 2014; Isbell & Szabo, 2014; LaRocco & Murdica, 2009).

Practice

Recommendations for practice include emphasizing the importance of moving from the “my students” stance to more of an “our students” perspective among school personnel. The “our students” perspective is key to successful implementation of an RTI model. This study also shows that opportunities for professional growth are critical. Teachers in the study demonstrated a desire to meet the needs of all students and a desire for more knowledge about RTI. For any implementation of a new systemic model, including RTI, it is important to facilitate the

development of teachers' skill sets. Potential ideas for increasing knowledge and skills include establishing across or within school mentors for teachers desiring more guidance on RTI (Cornu, 2005). Another recommendation that is more specific to administrators is to seek opportunities to promote teacher collaboration around ideas to help all students, not just students without disabilities (Murawski & Hughes, 2009). In a broader sense and with the understanding of the difficulty in implementing an RTI model unified manner, school districts must examine what practice are present and being implemented well across and within schools to determine what is working before adding any innovative components to their models (O'Connor & Freeman, 2012). For example, schools may have strong pre-referral teams that make data-based decisions. Therefore, there is no need to rework that part of the model. Finally, it is extremely important to develop and implement common language, definition, components, and a model for RTI based on research, in order to have a successful pre-referral model across schools.

Conclusion

Our findings offer a number of important implications for future research on RTI. While findings are consistent with an emphasis on the training and implementation of RTI at the elementary school level, they also highlight the unique barriers faced by middle/secondary school teachers and the important need for additional research that better describes implementation of RTI at these grade levels. Additionally, our findings suggest that instructional staff within this school district had developed critical misconceptions about RTI. Future efforts to evaluate the knowledge, concerns, and importance of RTI should collect information from participants on previous RTI-focused professional development activities. Moreover, while this exploration has helped us to gain a better understanding of the current implementation practices and challenges of RTI within a single school district, our findings must be further validated through replication studies that explore similar phenomena, and that attempt to further measure the benefits of pre-referral models like RTI on student level outcomes.

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