Factors that Impact Teachers' Perceptions of the Response to Intervention (RtI) School-Wide Reform Initiative

By

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Abstract

Over the course of their careers, educators experience constant innovation and school reform (Hargreaves, 2005). Although teachers' perceptions of school-based reform initiatives significantly influence their interest and willingness to implement new practices (Reimers et al., 1987), teachers' perspectives are rarely examined or considered before, during, or after implementation of reform initiatives (Nielsen et al., 2008; Shirley & Hargreaves, 2006). By understanding the connection between teacher variables and their perceptions of reform, schools will be better equipped to address and overcome participation barriers, implement reform with integrity, and enhance the achievement of all students. This study sought to examine the influence of four factors - congruent teaching philosophy, teacher self-efficacy beliefs, amount of teaching experience, and characteristics and evidence-based components of professional development (PD) - on perceptions of the response-to-intervention (RtI) school-wide reform initiative among 209 elementary (Grades 4K-5) general and special education teachers. Study findings indicated that congruent teaching philosophy, general personal efficacy beliefs, personal efficacy beliefs related to RtI, and PD were significantly associated with teachers' perceptions of RtI. Furthermore, the effect of PD on teachers' perceptions of RtI was found to be partially mediated through teachers' personal efficacy beliefs related to RtI. The current study sheds light on the nature of PD currently being offered in schools on RtI and discusses implications for systems change and future research.

CHAPTER 1

Introduction and Review of Research Literature

The field of education undergoes constant and ever expanding innovation and school reform (Hargreaves, 2005). There are many different approaches to enacting school change, such as changing the organization in an attempt to change the individual teachers (Elmore, Peterson, & McCarthy, 1996) or changing the individual teachers in an attempt to change the larger school organization (Berliner, 1988; Hall, 1985). Scholars of educational innovation agree that change is a complex and multifaceted process (Fullan, 1991, 1993). Although there is no single element that appears to be responsible for the success or failure of reform efforts (Fullan & Hargreaves, 1992; Gold, 1999), various factors can impact educational change, both positively and negatively (Fullan, 1991, 1993). For change to occur, it is important to understand how various factors impact successful implementation of school reform efforts (Guskey, 1988).

Teachers as Agents of Change and School Reform

Teachers are considered to be the centerpiece of educational reform (Datnow & Castellano, 2000; Haney, Lumpe, Czerniak, & Egan, 2002; Schmidt & Datnow, 2005), and the involvement of teachers in the school reform process is considered critical (Schmidt & Datnow, 2005). Regardless of the change approach that is employed, the vast majority of educational improvement efforts involve teachers to implement new or alternative instructional practices on a certain level (Guskey, 1988). Some reform initiatives require only minor changes be made to teachers' classroom activities, whereas other reform efforts require drastic changes to schools' organizational structure, curriculum, and teachers' instructional practices (Guskey, 1988). Therefore, it is easy to see how successful school reform starts and ends at the individual teacher level (Hall & Hord, 2001).

Impact of Teachers' Perceptions of School Reform Efforts

Teachers respond to school reform initiatives in a variety of ways. According to Datnow and Castellano (2000, p. 777), "some teachers push or sustain reform efforts, whereas others resist or actively subvert them." It is important to consider teachers' individual perceptions of the acceptability of reform initiatives because these perceptions impact teachers' implementation intentions (Han & Weiss, 2005; Reimers, Wacker, & Koeppl, 1987). Specifically, researchers have found that teachers' perceptions of reform initiatives significantly influence their interest and willingness to implement new practices (Reimers et al., 1987) as well as the amount of time they invest in implementing them (Han & Weiss, 2005). Thus, educational leaders should examine teachers' pre-implementation perceptions of targeted reform initiatives because these perceptions may indicate the likelihood that teachers will implement the reform.

Although teachers' views of new initiatives can have a strong impact on successful implementation of educational reform (Pyle, 2011), teachers' perspectives are rarely presented or considered when discussing the effectiveness of school reform or change initiatives (Nielsen, Barry, & Staab, 2008; Shirley & Hargreaves, 2006). As Shirley and Hargreaves (2006) explain, "teachers are no longer the drivers of reform, but the driven." A particular area of weakness in the current research literature is that teachers' perceptions are rarely examined and documented before, during, or after implementation of reform initiatives. Brighton (2003) critiques the current literature on educational change because it places much less emphasis on the role that internal factors (e.g., teachers' beliefs about teaching and learning) play in the success of change efforts compared to the importance of external factors (e.g., organizational structure) imposed upon the organization. Future research should focus on understanding the factors that influence teachers' perceptions of school reform if sustained change is the ultimate goal of innovation.

Influence of Internal Factors on Teachers' Perceptions of School Reform Initiatives

Even given uniform external conditions, teachers' individual responses to reform vary (Cuban, 1993). This indicates that internal factors are significant determinants in school and teacher reform and are worthy of consideration when schools are undertaking a new innovation (Brighton, 2003). Variations in teachers' responses to reform initiatives may result from numerous factors, including their diverse ideological beliefs (Brighton, 2003; Guskey, 1988; Kagan, 1992; Muncey & McQuillan, 1996), self-efficacy beliefs regarding teaching and learning (Allinder, 1994; Brighton, 2003; Guskey, 1988; Kagan 1992), and amount of experience in the field of education (Gibson & Brown, 1982; Hargreaves, 2005; Kagan, 1992). These specific internal factors, including discussion of measurement procedures, are addressed in the following sections.

According to Bandura (1986), beliefs are the best indicators of decisions people make. Solomon, Battistich, and Hom (1996) qualitatively examined and observed a relationship between teachers' beliefs, as identified through a self-report instrument, and their classroom practices. The most significant relationship was found between teachers' observed classroom practices and their beliefs regarding teacher authority, student compliance, and students' learning potential. Specifically, classrooms of teachers who believed in the importance of authority and student compliance and expressed skepticism about students' learning potential were coded high on the use of extrinsic control and teacher irritability and low relative to the provision of student autonomy, cooperative activity, and student participation in planning. These findings suggest that teachers' beliefs about teaching and learning are closely related to their instructional practices, thus indicating that teachers' perceptions of reform initiatives are at the core of educational change. Thus, for real change in instructional practices to occur, reform movements must address

the attitudes and perceptions of those who actually implement the change, which in the case of school reform are teachers (Sarason, 1996).

The concept of teacher beliefs is not consistently defined in the research literature (Kagan, 1992). Some researchers describe teacher beliefs as the "personal convictions or ideas one holds" (Haney et al., 2002), whereas other researchers refer to teachers' principles of practice, personal epistemologies, perspectives, practical knowledge, or orientations when they describe teacher beliefs (Kagan, 1992). Yet other researchers define teacher beliefs as "implicit assumptions about students, learning, classrooms, and the subject matter to be taught" (Kagan, 1992). While there are varying definitions of teacher beliefs in the research literature, the concept of teacher beliefs is generally interpreted as a means to "get inside teachers' heads" to describe their subjective knowledge and beliefs (Feiman-Nemser & Floden, 1986).

There are difficulties inherent in measuring teacher beliefs for various reasons (Kagan, 1992). First, beliefs cannot be judged directly from observing teacher behavior because teachers can participate in similar practices for very different reasons. Second, teacher beliefs are often tacit, and teachers may be unaware of their own beliefs. Moreover, teachers often do not possess the language with which to describe and label their beliefs. Therefore, direct questioning or self-report may not be a valid way to elicit beliefs. Lastly, beliefs are personal, and teachers may be reluctant to share them publicly.

Despite these measurement barriers, a variety of methods for eliciting teacher beliefs have been developed, with most involving some type of teacher self-disclosure (Nielsen et al., 2008). One such method of measuring teacher beliefs includes experimental tasks whereby teachers think aloud as they analyze classroom vignettes or view their own videotaped performances (Clark & Peterson, 1986; Kagan, 1990). Another common method involves semi-

structured interviews during which teachers are asked to recall specific events and decisions they made in their professional practice (Clark & Peterson, 1986; Kagan, 1990). Researchers have also used self-report procedures to measure teacher beliefs by using direct probes of teachers' thoughts, judgments and decisions (Armour-Thomas, 1989), such as traditional Likert-type attitude scales (Deci, Schwartz, Sheinman, & Ryan, 1981). In all of these procedures, researchers pay close attention to the specific language teachers use to describe their thoughts and actions related to teaching and learning (Clark & Peterson, 1986; Kagan, 1990).

Congruence of Beliefs

Human beings tend to act toward things based on the meanings and emotions they have for them (Carlgren, 1990). In the case of education, teachers' emotions are formed by experiences that result from their embeddedness in and interactions with the school environment (Kelchtermans, 2005). Thus, teachers usually attempt to make sense of reform in terms of their own beliefs and practice (Hill, 2001). Teachers' personal beliefs function as the filter and foundation of new knowledge (Kagan, 1992). As a result, teachers assimilate new knowledge into their existing frameworks (Duffy & Roehler, 1986; Spillane, Reiser, & Reimer, 2002) and judge the validity of new information based on their preexisting understandings about the nature of teaching and learning (Brighton, 2003). Therefore, educational reforms likely undergo a complex process of interpretation and reinterpretation by the teachers who implement them (Schmidt & Datnow, 2005).

One internal factor that has been found to impact the degree to which teachers implement innovative practices is the extent to which new practices are aligned with the teacher's present teaching philosophy and practices, a concept known as *congruence* (Guskey, 1988). Research has found that teachers whose ideologies of teaching and learning are congruent with the reform

effort's philosophy and practices typically support the change effort and feel positively about the change (Datnow & Castellano, 2000; Schmidt & Datnow, 2005). Brighton (2003) interviewed middle school teachers who were part of a school-reform initiative that involved providing high-level instruction for all students exhibiting a wide range of ability levels. Brighton (2003) found that teachers who held preexisting beliefs that were aligned with the philosophy and practices of the reform effort (e.g., differentiated instruction) experienced success in implementing the reform strategies. In contrast, teachers whose preexisting beliefs were incongruent with the philosophy and practices resisted implementing the reform strategies (Brighton, 2003). This suggests that having personal beliefs congruent with a reform effort facilitates teachers' learning and implementation of new practices, whereas incongruent beliefs act as a barrier to implementation (Kagan, 1992; Muncey & McQuillan, 1996).

A study conducted by Schmidt and Datnow (2005) found that teachers might resist change when their inherent beliefs and values about teaching and learning are threatened by a reform initiative. If the imposed educational reforms are incongruent with teachers' deeply held beliefs and norms about good teaching, teachers tend to experience intense feelings, such as doubt, anxiety, guilt, and shame, thus leading to negative emotions related to the reform effort. To help alleviate the anxiety and misinterpretations that hinder the necessary progress toward the goals of the reform, Datnow and Castellano (2000) recommend that reform leaders ascertain teachers' preexisting perceptions of the reform initiative, as well as their beliefs about teaching and learning in general, prior to implementing reform. When reform leaders are aware of the prevailing beliefs of individuals and actively incorporate these beliefs into the change process, there is an increased likelihood of systemic reform (Datnow & Castellano, 2000).

Measurement of congruence of beliefs. The methodology used in the research literature to measure teachers' philosophical beliefs on teaching and learning includes survey questionnaires and interview techniques. Guskey (1988) designed a survey questionnaire to measure teachers' attitudes toward the implementation of instructional reform. The questionnaire included one item designed to measure congruence by asking teachers to rate how similar the innovative practice is to the way they currently conduct their classes using a 5-point scale (*very different* to *very similar*). In contrast, Schmidt and Datnow (2005) collected their congruence data using a semi-structured interview protocol. The researchers interviewed teachers from five different schools. In most cases, the teachers were interviewed once unless the researchers opted to follow up with certain teachers via additional interviews. The interview questions inquired about the emotions the reform elicited in teachers to gauge how well the new reform philosophy aligned with their current beliefs.

Teacher Self-Efficacy Beliefs

Teachers' level of self-efficacy and their individual beliefs about their competence relative to their students and the specific reform effort is another internal factor that affects teachers' willingness and ability to change (Brighton, 2003; Guskey, 1988). Self-efficacy is the belief that one can successfully execute the behavior required to produce desired outcomes (Bandura, 1977). It is comprised of two components, efficacy expectations and outcome expectancy. Efficacy expectations are the conviction that one has the ability, knowledge, and skills to successfully perform actions required to produce desired outcome(s). Outcome expectancy is the belief that a given action will lead to expected outcomes. In order to be successful, a person must have both high efficacy expectations and high outcome expectancy (Bandura, 1977).

Bandura (1977) posits that a person's perceived self-efficacy influences his/her behavior. People participate in activities and behave in an assured manner when they perceive themselves as capable of handling situations that would otherwise be intimidating. This sense of capability involves having the necessary skills to bring about desired outcomes. Therefore, a person's self-efficacy is enhanced when he or she gradually acquires complex cognitive, social, linguistic, and physical skills (Bandura, 1977).

Efficacy expectations are important because they are a major determinant of a person's behavior (Bandura, 1977). Teachers with low efficacy expectations may believe that although students can learn, they themselves do not have the necessary skills or resources to teach them (Allinder, 1994). On the other hand, teachers with high efficacy expectations may feel more empowered to affect student achievement because they perceive themselves to possess the necessary skill set to do so. Not only do efficacy beliefs influence a person's choice of activities, but they also impact how much effort a person expends and how long he or she persists in difficult situations. A person's efficacy beliefs are most strongly influenced by performance outcomes. If a person experiences success, his or her efficacy expectations are raised, whereas repeated failures result in lowered expectations. Therefore, it is through successful experiences, known as *mastery experiences*, that people realize the most difficult obstacles can be overcome by substantial effort and skill (Bandura, 1977).

Teacher self-efficacy appears to be related to how teachers perceive their roles, conduct instruction, and interact with students (Allinder, 1994). Furthermore, research has demonstrated that elementary and secondary school teachers who express a high level of self-efficacy appear to be more receptive to implementing new instructional practices than their less efficacious colleagues (Allinder, 1994; Brighton, 2003; Guskey, 1988). Guskey (1988) posits that highly

efficacious teachers may be more effective in their practices and, therefore, more open and receptive to new ideas on instructional practices compared to less efficacious teachers. This finding seems to be a consistent trend in the research. According to Mann (1986), teachers who typically need the least improvement are the first to become involved in instructional improvement efforts, while teachers who need the most improvement remain separate and uninvolved. These findings demonstrate that teachers' self-efficacy beliefs have important implications on the successful adoption of school reform initiatives.

Measurement of self-efficacy beliefs. Researchers who examine teacher self-efficacy beliefs typically use qualitative or quantitative methods to measure this construct. For example, Guskey (1988) measured teachers' self-efficacy beliefs using a survey questionnaire that assessed how well teachers felt in control of factors influencing the academic success and failure of their students. Additionally, Allinder (1994) administered a survey questionnaire, called the *Teacher Self-Efficacy Scale*, to measure whether teachers believed they personally could bring about change in their students. In contrast, Brighton (2003) used a continuous observation and semi-structured interview technique, in which the same teachers were observed and interviewed over time. A strength of this latter method is that it prevented the researcher from drawing conclusions from data out of context by providing opportunities for teachers to clarify and explain their responses from interview questions.

Amount of Experience in Education

Among the most important of the internal factors that influence teachers' responses to innovation, yet one of the less widely discussed in the research literature, is teachers' amount of experience in education (Hargreaves, 2005; Kagan, 1992). Teachers are often characterized by their amount of experience in education, as are their experiences and understanding of

educational change (Hargreaves, 2005). As a teacher's experience increases, his or her professional knowledge grows richer and more coherent, forming a highly personalized belief system (Kagan, 1992). Kagan (1992) posits that it is this belief system (resulting from greater experience) that constrains teachers' perceptions, judgment, and behavior in future practice.

Hargreaves (2005) interviewed elementary and secondary school teachers of varying ages, different grades, and range of subject specialties to investigate how teachers' experiences of educational change vary over the course of their careers. Teachers' professional careers were analyzed according to three career stages: early career stage, mid-career stage, and later career stage. Teachers were specifically asked about the way in which their own emotional response to teaching had changed over their careers, and whether they believed their emotional reactions to change were similar to or different from their older and/or younger colleagues. The results of the study found that teachers interpreted educational change differently across the different career stages.

*Early career stage***.** Hargreaves (2005) defined the early career stage as teachers with five years of teaching experience or less. This population of teachers is typically described as adults who are trying to establish both their confidence and competence as professionals (Hargreaves, 2005). In the Hargreaves (2005) study, new teachers were found to be more amenable to change compared to their colleagues with more experience. A study conducted by Datnow and Castellano (2000) also supports this finding. Datnow and Castellano interviewed new teachers (less than two years of teaching experience) and found that most teachers supported or accepted the implementation of school-wide reform. Moreover, Hargreaves (2005) found that older colleagues describe the early-career teachers as being more flexible, adaptable, accepting, and enthusiastic in their dealings with educational change. The older colleagues hypothesize that

teachers in the early career stage are more apt to accept change quickly because they have not been in the profession for very long. As a result, teachers with less experience have the benefit of not being able to compare the new educational changes against much prior experience.

The early-career teachers in the Hargreaves (2005) study attributed their higher-level acceptance of educational change to their more recent professional training experience. These teachers indicated they were socialized into working with change in their teacher education programs, which prepared them as beginning teachers to cope with change in general. Rather than view change as a negative process, early-career teachers were trained to view change in a positive light and work to understand and implement changes encompassed by reform.

*Mid-career stage***.** Hargreaves (2005) defined the mid-career stage as teachers with 6-20 years of teaching experience. This group of teachers believed they are better able to cope with change because of their growing competence and confidence and their equitable attitude toward things. Overall, teachers in this stage of career were found to respond to change in a mostly positive way. Hargreaves (2005) posits that this is because mid-career teachers are able to draw on their career experiences in ways that allow them to remain open-minded and interested in change, yet "healthily skeptical" about it. Although mid-career teachers may revert back to the old way of doing things, they generally are willing to try the new practices embraced by school reform.

*Later career stage***.** The later career stage is defined as teachers with over 20 years of teaching experience (Hargreaves, 2005). Overall, research indicates that teachers in this stage are more likely to resist change and be more outspoken about questioning it (Hargreaves, 2005). Mid-career teachers hypothesize that later-career teachers lack the energy to deal with change because it is a lot of work to learn new ways of doing things (Hargreaves, 2005). Furthermore,

the later-career teachers report that the longer teachers have been in the profession, the longer they have been instructing students in a certain way, and the more reluctant they are to change their current practices (Hargreaves, 2005). Thus, older teachers' extensive teaching experience serves as a barrier to educational change.

Teacher experience and self-efficacy beliefs. The results of the Hargreaves (2005) study also provide evidence that teaching experience seems to impact teachers' self-efficacy beliefs (Gibson & Brown, 1982; Huberman, 1989; Webb 1982), which, as noted previously, may contribute to their perceptions of educational reform. Research conducted by Gibson and Brown (1982) specifically analyzed differences in teachers' self-efficacy patterns in relation to levels of professional training and teaching experience. The researchers administered a teacher self-efficacy scale to pre-service teachers during various points in their training programs as well as to in-service teachers with varying years of teaching experience. Results revealed that teachers' self-efficacy beliefs vary as a function of experience and training. Specifically, Gibson and Brown (1982) found that the pre-service teachers who had the least amount of training reported the lowest self-efficacy scores, and those who had completed more coursework reported higher levels of self-efficacy. These findings indicate that teachers develop stronger confidence in their teaching skills with increased levels of training.

Gibson and Brown (1982) also examined in-service teachers' self-efficacy beliefs. They found that beginning teachers, with less than five years of experience, had higher self-efficacy scores than did the teachers in the student teaching group with less experience. Furthermore, teachers who had between five and ten years of experience reported higher self-efficacy beliefs compared to those with less experience. Self-efficacy scores, however, tended to decrease in

teachers with more than 10 years of experience in the profession, which may relate to greater resistance to educational change among teachers in the later stages of their careers.

One could hypothesize that as teachers undergo more training, either in the form of teacher education programs or professional development, their self-efficacy beliefs increase because they feel better equipped with the necessary skills to instruct students. Research shows that part of the reason teachers adopt new practices is because they perceive that they either possess the skills or will receive the support necessary to implement them (Curtis, Castillo, & Cohen, 2008). This would explain why pre-service teachers with high levels of training and in-service teachers with five to ten years of experience reported higher self-efficacy beliefs compared to pre-service teachers with limited training and in-service teachers with less than five years of experience (Gibson & Brown, 1982).

It is also possible that teachers identified in the later career stage in the Hargreaves (2005) study and teachers with over 10 years of teaching experience in the Gibson and Brown (1982) study reported more skepticism toward change and decreased levels of self-efficacy. As older teachers, they have been confronted with repetitive change over the course of their careers; thus, the demand to develop the new skills required for each reform initiative may be too high (Hargreaves, 2005). Teachers with higher levels of teaching experience may feel poorly equipped to handle educational change and thus perceive school reform negatively. Little empirical research exists regarding the impact of teaching experience on school reform, particularly in relation to self-efficacy. Therefore, future research is needed to further examine this important relationship and how it impacts the implementation of school change.

Measurement of amount of teaching experience. There are various measurement limitations to the Hargreaves (2005) study that are important to note. First, data were collected

via an interview method in which the researchers asked teachers to concentrate on and recall in detail moments and experiences of positive and negative emotions regarding school reform. An interview technique, however, presents a number of challenges to collecting credible accounts of educators' experiences. For example, given that emotional experience is hard to articulate, the language used to describe emotions may vary cross-culturally and between different occupations; in addition, negative expressions towards one's job can be regarded as inappropriate (Hargreaves, 2005). Second, data relied on teachers' recollections of change in their dealing with reforms and are subject to recall bias (Hargreaves, 2005). Therefore, it is critical that future studies utilize research methodology that is sensitive to these limitations and does not rely on retrospective accounts of teachers' perceptions.

Summary of Research on Internal Factors Linked to Teacher Perceptions of Reform

It is clear that internal factors, including congruence of beliefs, teacher self-efficacy, and amount of experience in education, all play a large role in teachers' perceptions of reform initiatives and their overall level of implementation. Research has demonstrated that (a) teachers rely on their current knowledge and beliefs about the nature of teaching and learning to judge the validity of new reform initiatives (Brighton, 2003), (b) teachers appear to be more accepting of school reform when they perceive that they possess the necessary skills to carry out the new instructional practices (Allinder, 1994; Brighton, 2003; Guskey, 1988), and (c) teachers' understanding of educational change is related to their amount of experience in the field of education (Hargreaves, 2005). Therefore, it is critical that educational leaders understand the impact of these internal factors on teacher perceptions of reform initiatives and incorporate them into the change process.

Influence of External Factors on Teachers' Perceptions of School Reform Initiatives

External factors (e.g., organizational structure) also impact the degree to which teachers successfully implement reform initiatives (Kelchtermans, 2005; Nielsen, et al., 2008). External factors are important to study because professional change results both from factors within the teacher (i.e., internal factors) and from outside the teacher (i.e., external factors) (Nielsen et al., 2008). One external factor that has been found to have a strong impact on school reform is teacher professional development. This factor will be examined in the following section (Brighton, 2003; Nielsen et al., 2008; Schmidt & Datnow, 2005).

Professional Development

Professional development is typically used interchangeably with the terms staff development, vocational training, and continuing education, but it usually does not include pre-service education of professionals (Kratochwill, Volpiansky, Clements, & Ball, 2007). Specific to education, the National Staff Development Council clarifies that "effective staff development focuses on the knowledge, skills, and attitudes required of teachers, administrators, and other school employees so all students can learn and perform at high levels" (Sparks & Richardson, 1997, p. 3). There is emerging consensus among educators, researchers, and policymakers that investing in school personnel through professional development opportunities is essential to bring about school improvement and educational reform (Bredeson, 2003). Thus, professional development and other formal trainings are necessary to prepare school personnel to implement school change (Hall & Hord, 2001).

Recently, high-quality professional development has been receiving increased attention in the field of education (Nielsen et al., 2008). This is mostly due to the established relationship between teacher knowledge/skills and student outcomes and the pressure that the *No Child Left Behind Act* (2001) places on teachers to produce positive student performance (Kratochwill et

al., 2007). The *No Child Left Behind Act* (NCLB; 2001) specifically states that one of its purposes is "significantly elevating the quality of instruction by providing staff in participating schools with substantial opportunities for professional development." This requirement of federal educational legislation represents a major shift in thinking towards professional development as a way to effect change in student outcomes rather than focusing solely on the transmission of content knowledge and skills (Kratochwill et al., 2007).

Characteristics of effective professional development. The research literature reveals a variety of common characteristics of effective professional development practices for teachers (Bredeson, 2003). One such characteristic of effective PD is that it is continuous. Learning opportunities for implementers of school change should be ongoing as teachers develop more expertise in using the new reform practices (Bredeson, 2003). Hall and Hord (2001) caution that all too frequently training workshops are scheduled only at the beginning of the change process, failing to provide continued support throughout the various stages of implementation.

Nielsen and colleagues (2008) examined the effects of ongoing PD in supporting teacher knowledge of a literacy reform initiative. They found that as teachers continued to learn about the reform, they became more confident in their abilities to perform the required tasks. The teachers reported that as a result of their on-going PD experiences, their focus shifted from being primarily learners to being change agents by the end of the initiative's first year (Nielsen et al., 2008). In contrast, Woolfson and Brady (2009) examined the influence of attendance at short in-service training courses on teachers' self-efficacy beliefs related to working with children with learning difficulties. Results of the study did not display a clear relationship between teachers' participation in short in-service offerings and self-efficacy. This suggests that while teachers may gain new knowledge from short-term training experiences, this type of PD may not be sufficient

to challenge core beliefs about their ability to effect change in their students. The results of both studies highlight the potential benefits of on-going PD during reform initiatives.

Effective PD also links student learning to educator needs and school goals (Bredeson, 2003). Professional development is too often vague and off-target rather than being related to the innovation and focused on the vision of the proposed change (Hall & Hord, 2001). Supporting teachers in gaining the new information and skills required by the reform initiative is important for teachers to be able to engage in the new reform practices at the classroom and school levels (Hall & Hord, 2001). Professional development offerings that address teacher and school needs should not follow a "one-size-fits-all" model, but, instead, should be differentiated to match the specific needs of school staff and the overall school community (Brighton, 2003). Research has shown that teachers report consistent benefits when PD is connected to their immediate instructional needs (Nielsen et al., 2008). This indicates that reform leaders should work to develop PD opportunities that fit the individual and collective needs of the school organization (Bredeson, 2003; Nielsen et al., 2008).

A final characteristic of effective PD is that it is school-based and job-embedded (Bredeson, 2003). Nielson and colleagues (2008) studied the impact of job-embedded PD on teachers' learning and found that teachers learned more from PD experiences that were closely tied to classroom and school contexts. This was because the connection to teachers' work environment helped them to decide how to apply new instructional strategies in their own classrooms and schools. This study supports the idea that context matters to teachers and supports their learning through PD activities.

Components of effective professional development. Research also indicates that specific components of PD lead to higher levels of implementation of educational innovation

(Joyce & Showers, 2002). Joyce and Showers (2002) demonstrate compelling results for teacher acquisition and implementation of new knowledge and skills in their PD model (Table 1). The researchers found that PD consisting solely of theory and discussion components produces only modest gains in educator knowledge and demonstration of new skills within the training context, and no transfer of new skills to the classroom setting. Increased knowledge and skill implementation occur when demonstration and practice and feedback components are added to the PD model, but the transfer of new skills to the classroom setting remains low. When on-the-job coaching is added to the PD model, however, substantial gains are made in teacher knowledge, skill acquisition, and, most importantly, transfer or application of new skills in their classrooms. These findings suggest that PD models need to include all four PD components (i.e., theory and discussion, demonstration, practice with feedback, and coaching) if skill transfer to the classroom is the ultimate goal of training.

Table 1

Training Components and Attainment of Outcomes

Components	**Outcomes**		
	Knowledge	**Skill**	**Transfer**
Theory & Discussion	10%	5%	0%
…+ Demonstration	30%	20%	0%
…+ Practice & Feedback	60%	60%	5%
…+ Peer Coaching	95%	95%	95%

Note. Adapted from Joyce, B., & Showers, B. (2002). *Student achievement through staff development* (3rd ed.). Alexandria, VA: Association for Supervision and Curriculum Development.

Need for professional development in school reform. Numerous research studies document the need for professional development during the change process (Brighton, 2003; Nielsen et al., 2008; Schmidt & Datnow, 2005), particularly PD that incorporates the above, research-supported characteristics and evidence-based components. Professional development

can serve as an important organizational support structure that equips teachers with the necessary skills to execute the practices embraced by reform and to increase their ownership and stable use of the innovation (Fullan, 2011). Even if teachers' preexisting beliefs are congruent with the reform effort, misunderstandings and misinterpretations of key components may exist that prevent the successful implementation of reform efforts (Brighton, 2003). Therefore, it is critical to identify and redirect these misunderstandings early in the reform process to prevent or reduce the possibility of educators "routinizing" ineffective practices (Brighton, 2003).

Specifically, there is a strong need for PD to produce teachers who are knowledgeable about the reform, have the tools to implement the reform, and understand how the reform differs from their current practice (Schmidt & Datnow, 2005). Without all of these conditions in place, educational leaders can expect to see very little change at the classroom level. This demonstrates the importance of investing considerable energy and resources into PD opportunities for school staff. Although an emphasis on PD may infer that school leaders underestimate the skills of school staff, its primary purpose is to help even highly skilled teachers adjust to the ever-changing needs of diverse schools. "Consistent calls for teacher professional development is not an indictment of teacher professionalism, but rather recognition that the academic and social needs of today's children, especially those in impoverished rural and urban settings, require highly skilled teachers and principals with new knowledge, skills, and professional competencies" (Bredeson, 2003, p. 13).

Self-efficacy and professional development. Professional development is a common means used by reform leaders to enhance teachers' skills in implementing new educational practices. Strong PD is necessary to ensure that intervention programs are implemented with integrity to improve student outcomes, which is the goal of school change (Kratochwill et al.,

2007). Teachers likely need to perceive themselves as capable of producing desired outcomes for them to perform the tasks required by reform initiatives. Surprisingly, little research is available on the effect of reform-related PD on teachers' self-efficacy beliefs. Therefore, there is a critical need for future studies to examine the impact of professional development that is (a) ongoing, (b) linked to teacher needs and school goals, and (c) school-based and job-embedded on teachers' perceived competence in implementing reform practices. It would be especially helpful to know which of these three PD characteristics is most highly related to teachers' self-efficacy beliefs.

There is also a need for future research to investigate the impact of specific components of PD (i.e., theory and discussion, demonstration, practice with feedback, and coaching) on teacher self-efficacy beliefs. Whereas Joyce and Showers (2002) identified PD components that enable teachers to implement new practices or skills in their own classrooms, the relationships among teacher self-efficacy beliefs, their perceptions of reform initiatives, and the extent to which PD related to reform practices incorporates the four evidence-based components are still unknown and, as such, warrant further research.

Summary of Research on Teachers' Perceptions of School Reform

The level of commitment from teachers regarding a reform initiative is likely to influence the degree to which new practices are implemented. Therefore, it is important to consider factors that will impact educators' perceptions regarding the worth of a reform initiative before beginning implementation (Curtis et al., 2008). Several factors have been shown to impact teachers' perceptions of change, including both internal factors (congruent teaching philosophy, teacher self-efficacy beliefs, and amount of experience) as well as external factors (in particular, professional development). Figure 1 demonstrates how each of these factors may contribute directly to teacher perceptions of reform initiatives. Moreover, as shown in Figure 1, teacher

self-efficacy beliefs, conceptually, may function as a mediating variable; that is, at least some of the effect of experience and professional development on teachers' perceptions may be accounted for by the effect each of these variables has on teachers' self-efficacy beliefs. For example, PD related to a reform initiative may enhance teachers' self-efficacy, which, in turn, contributes to their positive attitudes toward the reform.

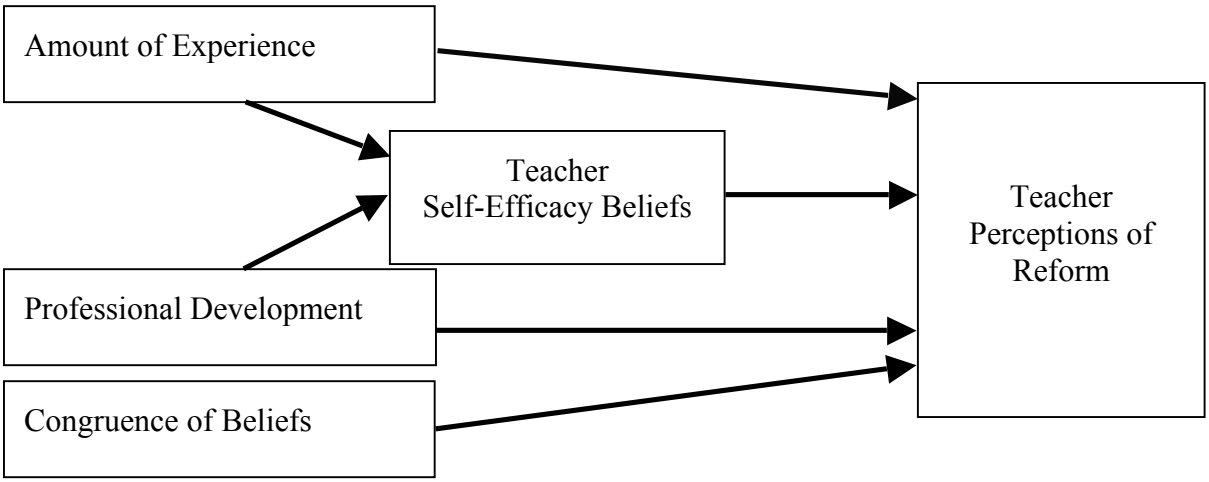

Figure 1. Conceptual model of the relationships among teaching experience, professional development, self-efficacy beliefs, and congruence of beliefs on teachers' perceptions of reform initiatives

One such reform initiative is Response-to-Intervention (RtI). Educational leaders would benefit from understanding more about the effect of internal and external factors on teachers' perceptions of the RtI model because limited research currently exists in this area. While some implications can be drawn from the literature on school-wide reform, more direct connections between internal and external factors on teachers' perceptions of RtI need to be examined. The next sections introduce the RtI reform initiative and present some preliminary findings on the impact of congruent teaching philosophy, teacher self-efficacy beliefs, amount of experience, and professional development on teacher perceptions of RtI.

Response-to-Intervention (RtI) Reform Initiative

RtI Model

An example of a recent school reform initiative that is becoming increasingly more popular as a systems-level approach to identifying students' instructional needs is the Response-to-Intervention model (Reschly & Bergstrom, 2009). The RtI model is a systematic and data-based assessment-intervention method for identifying, defining, and resolving a wide range of student difficulties and disabilities, such as learning disabilities and behavior disorders (Brown-Chidsey & Steege, 2005; Newell & Kratochwill, 2007; Sugai & Horner, 2009). A proposed strength of the RtI model is that it promotes a much more proactive stance to addressing learning challenges compared to a traditional "wait-to-fail" model that is typically employed by school systems (Brown-Chidsey & Steege, 2005; Gotshall & Stefanou, 2011).

Despite variability in conceptualization and implementation of RtI, all RtI models are organized around graded levels of instruction or intervention, called "tiers," that are matched to the needs of students (Reschly & Bergstrom, 2009). Each tier represents a specific level of intervention intensity, thus the greater the needs of a student, the more intense intervention he or she will receive. Tier 1 within the RtI model represents the core curriculum and behavior programming that is delivered to all students. The goal of Tier 1 is to prevent learning and behavior difficulties by delivering effective evidence-based instruction to all students (Reschly & Bergstrom, 2009). Students who perform below expectations at Tier 1 receive more intensified support in Tier 2. Tier 2 interventions are designed and implemented either in the general education classroom or in a combination of the general education classroom and pull-out, small groups (Reschly & Bergstrom, 2009). Tier 3 interventions are delivered to students who do not make sufficient progress in Tier 2 and who are likely to require long-term, sustained, intense

interventions (Reschly & Bergstrom, 2009). According to Brown-Chidsey and Steege (2005, p. 3), "Tier 3 does not include special education services; rather, it is a transition point for those students who have not yet found success in school." For some students, the intensified instruction they receive in Tiers 1, 2 or 3 will be enough to help them be successful in school; however, students who do not make adequate progress in these tiers are referred for special education evaluation (Reschly & Bergstrom, 2009).

Assessment drives the decision-making process within an RtI system because without assessment it would be impossible to know who requires more intense interventions, how best to intervene, or whether the interventions are effective in achieving students' long-range goals (Riley-Tillman & Burns, 2009). As a result, other critical features of the RtI model include universal screening of all students, progress monitoring of student performance, and data-based decision making. Periodic universal screening plays an important role in an RtI system, as it assesses the curricular and instructional effectiveness and individual risk status of all students (Reschly & Bergstrom, 2009; Riley-Tillman & Burns, 2009). Progress monitoring is also essential to the RtI system because it helps educators to determine whether students are benefitting from interventions by indicating how the child is (or is not) responding to instruction (Reschly & Bergstrom, 2009; Riley-Tillman, Burns, 2009). Proponents of RtI predict that this data-based model of service delivery will reduce the number of students who receive special education services, thus potentially decreasing discrimination in the special education evaluation process and improving the educational outcomes of all students (Brown-Chidsey & Steege, 2005; Newell & Kratochwill, 2007).

RtI Systems Change Model

According to the *Response to Intervention Blueprints* developed by Kurns and Tilly (2008), adoption of RtI in practice typically proceeds through three stages: consensus building, infrastructure building, and implementation. Consensus building involves communicating the concepts of RtI to all implementers as well as explaining how an RtI model will address their system's unique needs (Kurns & Tilly, 2008). According to Wallace, Blase, Fixsen, and Naoom (2008), buy-in, commitment, and program acceptance during this stage tend to have a big impact on the success and sustainability of change initiatives in education.

In the second stage, infrastructure building, districts and building sites examine how well their RtI system aligns with the critical components of the model. According to Sugai and Horner (2009), the six core defining components of RtI are:

1. Interventions that are supported by scientifically-based research.
2. Interventions that are organized along a tiered continuum that increases in intensity.
3. Standardized problem-solving protocol for assessment and instructional decision-making.
4. Explicit data-based decision rules for assessing student progress and making instructional and intervention adjustments.
5. Emphasis on assessing and ensuring implementation integrity.
6. Regular and systematic screening for early identification of students whose performance is not responsive to instruction.

In the infrastructure-building stage, districts and building sites specifically examine current aspects of their RtI system that are necessary to facilitate and support implementation, as well as the areas that are in need of improvement (Kurns & Tilly, 2008). The main focus of this stage is on creating the necessary support structures for implementation.

The third stage, implementation, involves actual implementation of RtI practices and institutionalizing them into a school system's everyday routine (Kurns & Tilly, 2008). For RtI to be implemented effectively, changes in educators' skill levels, organizational capacity, and organizational culture are necessary. Educational leaders must understand that it takes time and practice for educators to adjust to and integrate new ideas, technology, and behaviors to levels of routine practice (Bredeson, 2003; Wallace et al., 2008).

Research on Teachers' Beliefs towards RtI

Much like any reform, the adoption and successful implementation of RtI begins at the individual teacher level (LaRocco & Murdica, 2009). Whereas much of the research literature provides guidance on how educational leaders should support teachers when implementing change, little, if any research, examines teachers' concerns about implementing RtI (LaRocco & Murdica, 2009; Nunn, Jantz, & Butikofer, 2009; Rinaldi, Averill, & Stuart, 2011). Specifically, little research has been conducted on how internal factors, such as congruent teaching philosophy, self-efficacy beliefs, and years of experience, and external factors, specifically professional development, impact teachers' views of RtI. This section will present the current state of research on the relationship between these influential variables and RtI.

Congruence of Beliefs

There is a critical need for researchers to examine the extent to which teachers' current teaching philosophies are aligned with the educational philosophies embraced by the RtI model because little information currently exists in this area. As previous research has shown, teachers' beliefs affect their instructional practices (Haney et al., 2002). Teachers whose beliefs about teaching and learning are congruent with the reform philosophy and practices typically support the change effort and feel positively about the change, whereas those whose beliefs are

incongruent with the reform philosophy and practices tend to resist it (Datnow & Castellano, 2000; Schmidt & Datnow, 2005). These findings indicate that congruence of teachers' beliefs have important implications for success in implementing an RtI model.

Congruence is an important area to study because the RtI model's philosophy represents a change in the traditional approach to serving students who experience learning difficulties, with RtI promoting a more proactive, preventive, and inclusive stance than conventional bifurcation of general and special education approaches (Gotshall & Stefanou, 2011). Given that general education teachers are on the frontline of addressing learning difficulties in the RtI model, the reform has the potential to significantly affect the landscape of K-12 classrooms (Gotshall & Stefanou, 2011). Therefore, understanding teachers' current beliefs and the congruence (or incongruence) with the philosophy and practices associated with RtI will help educational leaders identify specific topics for professional development to achieve better alignment between current practices and RtI methods. This information will also provide educational leaders with insight into how much work will need to be conducted before implementing the RtI model in their schools.

Self-Efficacy

RtI is a model of service delivery that promotes inclusive practices by providing early intervening services of varying intensities to students who are not responding adequately to the core curriculum within the general education setting. In order for students with learning difficulties to experience the same positive aspects of education in inclusive settings as their typically-developing peers, they need to be taught by teachers who (a) believe they can produce positive educational outcomes for diverse learners, and (b) view themselves as capable of providing an effective instructional environment (Kurtz, Schneider, Carr, Borkowski, &

Rellinger, 1990). High levels of teacher self-efficacy are especially important for schools implementing an RtI model because the general education teacher is typically the only interventionist in Tier 1 and may hold much of the intervention responsibility in Tier 2 (Gotshall & Stefanou, 2011). This places an even greater expectation on any one teacher's competence to differentiate instruction for students with a variety of skill levels. Therefore, teachers' attitudes toward RtI may be determined, in part, by the extent to which they view themselves as able to provide educational experiences that will afford learning opportunities for all students (Woolfson & Brady, 2009).

Research indicates that teachers with high levels of self-efficacy tend to view outside influences as being more responsible for a student's lack of academic progress rather than the disability (Woolfson & Brady, 2009). Additionally, teachers with higher self-efficacy view the causes of learning difficulties as more amenable to change than their less efficacious colleagues (Woolfson & Brady, 2009). These views on student learning are aligned with the RtI approach, as it focuses on what can be changed in the environment to produce better outcomes for students rather than attributing learning difficulties to a deficit within the child (Reschly & Bergstrom, 2009). Within an RtI approach, students who might otherwise be referred for special education services under traditional service delivery models now remain in the general education setting with intensified supports delivered by the general education teacher. Thus, there is a greater chance that RtI will be implemented as intended if teachers adopt this fundamental shift in thinking about learning and behavior problems from a within-child perspective to an ecological systems perspective.

Other research has found that despite being able to suggest viable classroom interventions, teachers with lower self-efficacy tend to refer students for a special education

evaluation rather than conduct their own classroom-based interventions. This suggests that while teachers with low self-efficacy are able to identify the appropriate support required by students with learning difficulties, they may perceive themselves as lacking the ability to instruct these students, thus enlisting the help of special educators. On the other hand, teachers with high self-efficacy believe that classroom interventions are a viable option and that general education teachers can successfully implement them (Podell & Soodak, 1993). Given these findings, it is not surprising that higher levels of teacher self-efficacy are also related to lower levels of anxiety toward inclusion (Soodak, Podell, & Lehman, 1998) and a more positive view toward inclusion overall (Podell & Soodak, 1993; Soodak & Podell, 1993; Soodak et al., 1998).

Although the previous studies were not conducted within a formal RtI framework, their findings are relevant for understanding perceptions of key concepts and practices embraced by the RtI model (e.g., inclusive practices, general education teachers as primary interventionists, etc.). Therefore, if reform leaders can work on enhancing all teachers' skills in providing early intervening services for diverse learners as well as increasing their perceived competency in using these skills, teachers' self-efficacy towards working with children with learning difficulties may increase. If this indeed is the case, teachers' enhanced self-efficacy would undoubtedly support implementation of an RtI system in their schools. An important area for future research is examining the relation between teachers' self-efficacy beliefs and their attitudes toward and implementation of RtI practices.

Amount of Experience in Education

One can imagine that teachers in their later career stages have been confronted with a variety of educational reforms throughout their careers, requiring them to constantly acquire new skills and participate in new educational practices (Hargreaves, 2005). As a result, it is possible

that they feel tired from the demands associated with reform initiatives and, thus, are less responsive to implementing RtI compared to their colleagues with less teaching experience. On the other hand, one could also hypothesize that teachers with more teaching experience have rich background knowledge and experiences on which they can draw when acquiring new skills and implementing new practices; thus, they may be more open to implementing RtI. This is an area of research that is yet to be examined within an RtI model. Nonetheless, the impact of teaching experience is an important variable to study because it has potential implications on RtI professional development and reform implementation.

Professional Development

All well-implemented RtI systems involve significant continuing education opportunities for in-service staff, including teachers (Reschly & Bergstrom, 2009). Research indicates that implementation of RtI requires substantial change to teacher practices, which might not be congruent with a school's current policies and practices (Pyle, 2011). Some teachers are well-prepared for the RtI system changes but many are not (Reschly & Bergstrom, 2009). This emphasizes a strong need for prospective users of innovations like RtI to learn new skills and develop specialized knowledge about the reform (Kratochwill et al., 2007).

Not surprisingly, a central issue in RtI implementation relates to the actual content of the reform itself (Kratochwill et al., 2007). Successful implementation of RtI is multifaceted because it involves not only knowledge of but also skills in selecting evidence-based interventions, using multi-tiered intervention models, screening, assessment and progress monitoring, and administering interventions with a high degree of integrity (Kratochwill et al., 2007). Asking teachers to monitor the progress of every child routinely and to make accommodations where needed raises the question of how prepared teachers feel to execute these

tasks (Gotshall & Stefanou, 2011). It is easy to see how teachers may be intimidated and possibly unmotivated to implement such a complex system of service delivery. Therefore, one could hypothesize that teachers who perceive themselves as possessing the required skills to implement the reform will be more receptive to adopting the RtI approach. Researchers posit that educators who master RtI skills will experience reduced anxiety surrounding implementation and give educators more confidence in applying their new skills in their classrooms (Kratochwill et al., 2007). Collectively, these findings underscore the importance of professional development for effective RtI implementation.

Need for professional development related to RtI. Reynolds and Shaywitz (2009) state that the positive academic outcomes associated with RtI are dependent on tiered instruction being delivered with high degrees of fidelity and integrity. A major problem with the RtI model is that "the USDE Office of Special Education and Rehabilitation regulations for special education promote the use of RtI, but they are unable to provide sufficient guidance to allow for reasonable consistencies in its development, application, and outcomes" (Reynolds & Shaywitz, 2009, p. 131). Additionally, there is a lack of procedural direction currently provided in the research literature. These researchers believe that the shortage of procedural guidance will result in RtI implementation that lacks fidelity, suffers from inconsistent measurement models, and creates enhanced levels of subjectivity in both diagnosis and treatment. This poses a strong need for professional development to train teachers to fully implement the RtI model with integrity.

Research on professional development and the RtI model has emerged relatively recently in the research literature (Kratochwill et al., 2007). Findings from studies examining RtI training provide insight into the potential benefits of professional development on the future success of the reform. Rinaldi and colleagues (2011) surveyed and interviewed educators about their

perceptions of RtI and professional development. In their study, ongoing PD was provided in a variety of ways to teachers, including weekly training sessions, monthly meetings with a university researcher who specialized in RtI, and other trainings over the first three years of RtI implementation. The researchers found that general education teachers, special education teachers, and reading specialists initially described themselves as being "optimistically frustrated" in the first year of implementation because they were still learning the new skills associated with the model and were unsure of how to apply them to their own classrooms (Greenfield, Rinaldi, Proctor, & Cardarelli, 2010). By the third year of implementation, however, the teachers shifted from feeling like learners to being change agents able to bring about change in their own learning and their students' learning (Rinaldi et al., 2011). These preliminary findings suggest that ongoing PD provided teachers with the necessary skills to perform RtI-related tasks over the first three years of RtI implementation. Despite these findings, however, more research needs to be conducted on the effect of high-quality professional development on teachers' perceptions and implementation of RtI.

Self-efficacy and professional development. Consistent with the conceptual model presented earlier, it is possible that ongoing PD enhanced teachers' self-efficacy in the Rinaldi et al. (2011) study, allowing them to perceive themselves as capable of affecting change in their students' achievement through RtI. One important area for further research is the relationship between ongoing PD (and characteristics of the PD experiences) and teachers' self-efficacy related to implementation of RtI practices to achieve positive student outcomes. While the Rinaldi et al. (2011) study identified the topics of PD sessions, it is unclear which specific components of PD were implemented in their training. Therefore, another important area for

future research is the relationship between implementation of evidence-based PD components and teachers' self-efficacy beliefs.

Limitations of current research on RtI professional development. A major limitation in the RtI literature is that few studies specifically examine how professional development impacts teachers' perceptions of the RtI model. The one study that looked at PD related to implementation of RtI presented a number of limitations (Rinaldi et al., 2011). First, the research sample was small (n = 26 teachers), making it difficult to generalize the findings to the greater teacher population. Second, participants self-selected into the study and may not represent all educators. Third, the researchers only interviewed elementary school teachers, thus limiting generalization of their findings to elementary educators. These shortcomings, combined with the fact that there is little research in this area, highlight a critical need for future research to examine the perceptions of secondary school teachers as well as a larger sample of elementary school teachers. Research in this area will extend the findings of Rinaldi et al. (2011) and shed light on the relation between professional development and teachers' perceptions of RtI.

Implications for Future Research on RtI

Educational reform leaders would greatly benefit from an enhanced understanding of teachers' perceptions of RtI (and how those perceptions are related to both internal and external factors) because it impacts the degree to which implementation occurs (Curtis et al., 2008) and will inform future classroom and school practices (Rinaldi et al., 2011). Understanding the variables that contribute to teachers' perceptions of a reform initiative, such as RtI, will allow school leadership teams to gauge the extent to which certain teachers may require greater support and to target specific areas for professional development. Without taking teachers' perceptions into consideration, RtI may fall short of its potential to improve student outcomes and provide

students with a more effective service delivery system. Many important reasons support the need for future research to explore the factors that contribute to teacher perceptions of the RtI approach (Pyle, 2011; Rinaldi et al., 2011).

CHAPTER 2

Statement of Problem and Research Questions

Statement of Problem

Teachers' perceptions of school-based reform initiatives significantly influence their interest and willingness to implement new practices (Reimers et al., 1987) and, as such, may predict the eventual success of a change effort. Teachers' perspectives, however, are rarely examined or considered before, during, or after implementation of reform initiatives (Nielsen et al., 2008; Shirley & Hargreaves, 2006). A limitation in the current research literature is that it places minimal emphasis on internal factors (e.g., teachers' self-efficacy beliefs) that shape teachers' willingness to implement new practices. Therefore, if sustained change is the ultimate goal of innovation, there is a need for future research to expand its focus on both external and internal factors that influence teachers' perceptions of educational reform.

The purpose of this study was to evaluate teachers' perceptions of the Response-to-Intervention (RtI) school-wide reform initiative. RtI is one of the most common reform initiatives currently being implemented in schools due to the high number of referrals for special education evaluation and placement (Brown-Chidsey & Steege, 2005) and concerns about all students having equitable access to general education (Stuart, Rinaldi, & Higgins-Averill, 2011). The Individuals with Disabilities Education Act (IDEA) first permitted the use of RtI as part of the evaluation procedures for identifying students with specific learning disabilities (SLD) and as a method to enhance student learning in the general education setting in 2004 (Jimerson, Burns, & VanDerHeyden, 2007). As a result, a number of states, including Wisconsin, have revised their SLD rules. According to Wisconsin state statutes, schools were required to have in place a process of RtI for SLD identification by December 1, 2013 (Brown, 2012). RtI represents a

system-wide shift in assessment and intervention that will likely require current school personnel to adopt new instructional practices (Reschly & Bergstrom, 2009). Whereas some teachers may perceive RtI as a positive change in their schools, other teachers may perceive the model as an unnecessary change that contradicts their beliefs about teaching and learning. As a result, teachers will likely respond to the RtI initiative in a variety of ways, with some teachers supporting the effort and others resisting it.

Educational leaders will benefit from understanding the factors that impact educators' perceptions of RtI to enable them to effectively support teachers throughout the change process. One goal of this study was to address a critical gap in the literature by examining the effects of three internal (i.e., within-teacher) factors (congruent teaching philosophy, teacher self-efficacy beliefs, and amount of experience) on teachers' perceptions of reform. Another goal of this study was to investigate the effects of external factors, specifically characteristics and evidence-based components of PD, on teachers' perceptions of RtI. By understanding the connection between teacher variables and their perceptions of RtI, schools will be better equipped to address and overcome participation barriers, implement RtI with integrity, and enhance the achievement of all students.

Research Questions and Predictions

This study addressed four research questions related to teachers' perceptions of the RtI school-wide reform initiative.

Research Question 1

To what extent do (a) congruence of beliefs, (b) teacher self-efficacy, (c) amount of experience, and (d) professional development explain teacher perceptions of RtI reform?

Prediction (a): Research indicates that teachers whose ideologies of teaching and learning are congruent with the philosophy and practices embraced by a reform initiative typically support the change effort (Datnow & Castellano, 2000; Schmidt & Datnow, 2005). In contrast, teachers whose ideologies of teaching and learning are incongruent with educational reforms tend to experience negative emotions related to the reform effort (Brighton, 2003; Schmidt and Datnow, 2005). It was, therefore, predicted that the more teachers' personal beliefs regarding teaching and learning are aligned with (or congruent with) the philosophies and practices associated with RtI, the more positively they would feel about the reform initiative.

Prediction (b): Research has demonstrated that teachers who express a high level of self-efficacy appear to be more receptive to implementing new instructional practices than their less efficacious colleagues (Allinder, 1994; Brighton, 2003; Guskey, 1988). It was predicted that teachers with higher levels of self-efficacy for implementing RtI practices would have more positive perceptions towards RtI compared to teachers who perceive themselves as less efficacious.

Prediction (c): Teachers' views of educational change vary over the course of their careers. Research indicates that teachers in the early career stage (five years or fewer of teaching experience) and mid-career stage (6-20 years of teaching experience) tend to be more amenable to change compared to their colleagues who have more teaching experience (Datnow & Castellano, 2000; Hargreaves, 2005). Teachers in the later career stage (over 20 years of teaching experience) are more likely to resist change (Hargreaves, 2005). It was predicted that teachers in the early- and mid-career stages would perceive RtI in a mostly positive way, with early career teachers feeling the most positive about the reform. In contrast, it was predicted that teachers in

the later career stage would view RtI less positively compared to their early- and mid-career colleagues.

Prediction (d): Little research exists on the relationship between professional development and teachers' perceptions of RtI. Researchers posit, however, that educators who possess the required skills to implement the reform will be more receptive to adopting the RtI approach (Kratochwill et al., 2007). Therefore, it was predicted that teachers who receive more elements of high-quality PD related to RtI would perceive the reform initiative more positively compared to teachers who receive fewer elements of high-quality PD related to RtI.

Research Question 2

To what extent does (a) amount of experience and (b) professional development affect self-efficacy beliefs?

Prediction (a): Research indicates that teachers with up to 10 years of experience possess higher self-efficacy beliefs regarding their teaching skills (Gibson & Brown, 1982). In contrast, self-efficacy beliefs tend to be lower among teachers with more than 10 years of experience. Therefore, it was predicted that teachers with 10 years of experience in education or less would have higher self-efficacy beliefs related to implementing RtI compared to teachers with over 10 years of experience in education.

Prediction (b): Although this relationship has not yet been directly studied, I examined the extent to which the quality of professional development related to RtI affects teacher self-efficacy beliefs. It was predicted that teachers who receive PD related to RtI that incorporates a greater number of research-supported elements of high-quality PD would perceive themselves as more efficacious in implementing RtI. Alternatively, it was predicted that teachers who receive fewer elements of high-quality PD related to RtI would perceive themselves as less efficacious.

Research Question 3

To what extent do self-efficacy beliefs mediate the relationship between (a) amount of experience and teacher perceptions of reform and (b) professional development and teacher perceptions of reform?

Prediction (a): It was predicted that teacher self-efficacy would mediate the relation between years of teaching experience and teacher perceptions. That is, the number of years of teaching experience was predicted to affect teachers' self-efficacy beliefs (see RQ2), which, in turn, would contribute to teacher perceptions of RtI.

Prediction (b): It was predicted that teacher self-efficacy would mediate the positive relation between PD and teacher perceptions. That is, effective professional development was predicted to enhance teacher self-efficacy beliefs (see RQ2), which, in turn, would contribute to more positive teacher perceptions of RtI.

Research Question 4

To what extent do (a) characteristics of PD and (b) components of PD account for teacher perceptions of reform?

Prediction (a): It was predicted that all three characteristics of PD would demonstrate a significant association with teacher perceptions of RtI.

Prediction (b): It was predicted that all four components of PD would demonstrate a significant association with teacher perceptions of RtI.

CHAPTER 3

Method

Participants

The participants were 209 elementary-level general and special education teachers from 32 schools located in southeastern Wisconsin. The selection criteria, sampling procedures, and participant characteristics are described below.

Selection Criteria

The sample was determined using three selection criteria. First, participants were elementary general and special education teachers who work with students in Grades 4K-5. Elementary teachers were targeted because, to date, RtI implementation has occurred primarily at the elementary level (Burns & Gibbons, 2008). Consequently, there are a limited number of instruments designed to measure secondary teachers' perceptions of RtI. Moreover, secondary teachers may be less likely to have received professional development related to RtI compared to elementary teachers. Given that professional development was an important variable in the current study, elementary teachers were selected because they are likely to have participated in a greater range of professional development experiences.

Second, teachers were required to have some form of previous professional development related to RtI to be eligible to participate in the survey. Professional development activities ranged from simple discussions, readings, or lectures on RtI to more intensive levels of support, such as peer coaching. This selection criterion was necessary to examine the effects of professional development on teacher perceptions of RtI. Third, participants needed to be working in schools that were implementing RtI at the time of the study. In this study, "implementation" included Kurns and Tilly's (2008) three stages of RtI implementation, specifically consensus

building, infrastructure building, and implementation. This criterion was necessary to ensure that participants had some level of familiarity with RtI. Teachers were required to meet all three selection criteria to participate in the study.

According to Agresti and Finlay (2009), the ideal sample size in a multiple regression design "should be at least about 10 times the number of explanatory variables" (p. 335). Although this study included four explanatory variables (congruence of beliefs, amount of experience, teacher self-efficacy, and PD), two were comprised of multiple components. Specifically, the professional development variable included a composite measure of three separate PD characteristics and a measure for four separate components of PD. The self-efficacy variable was comprised of measures for two components of teachers' self-efficacy beliefs: general personal efficacy (i.e., general efficacy expectations) and perceptions of RtI skills (i.e., efficacy expectations specific to RtI). These components were treated as separate explanatory variables, resulting in a minimum sample size of approximately 100 teachers. Given that statistical power increases with a larger sample size (Agresti & Finlay, 2009), the initial sample size for this study was increased by 50% to create a target sample size range of 150-200 teachers.

Sampling Frame

A convenience sampling technique was used to access participants for this study. Participants were initially recruited at an RtI Coordinators meeting for educators from the Cooperative Educational Service Agency (CESA) 1 hosted by the Wisconsin RtI Center in January 2013. Individuals who attended the meeting included district-level RtI Coordinators as well as principals, special education teachers, general education teachers, and other school staff with formal or informal RtI leadership roles. To ensure that all eligible school districts in CESA 1 had an opportunity to participate in the study, including the districts that did not attend the

January meeting, the Wisconsin RtI Center's Southeast Regional Technical Assistance Coordinator e-mailed the study's recruitment letter to all RtI Coordinators in CESA 1. Educators who were interested in participating in the study connected the researcher with district administrators and school principals to obtain consent for collecting data in their district and school. After granting consent, school and district administrators identified and provided contact information for teachers in their districts who were eligible and interested in participating.

A single CESA was included in the study to ensure a uniform policy context for RtI implementation across all districts. The CESA 1 regional sampling frame is composed of 45 public school districts in six counties in southeastern Wisconsin. CESA 1 employs over 29,000 educators and serves over 250,000 students across 486 schools. Although there were a total of 45 school districts in CESA 1 at the time of the study, three of the districts served only students in junior and senior high school. Therefore, 42 districts that served students in Grades 4K-5 were included in the sampling frame and were contacted for participation in the study. Figure 2 illustrates the sampling frame and percentage of schools within districts that participated in the survey.

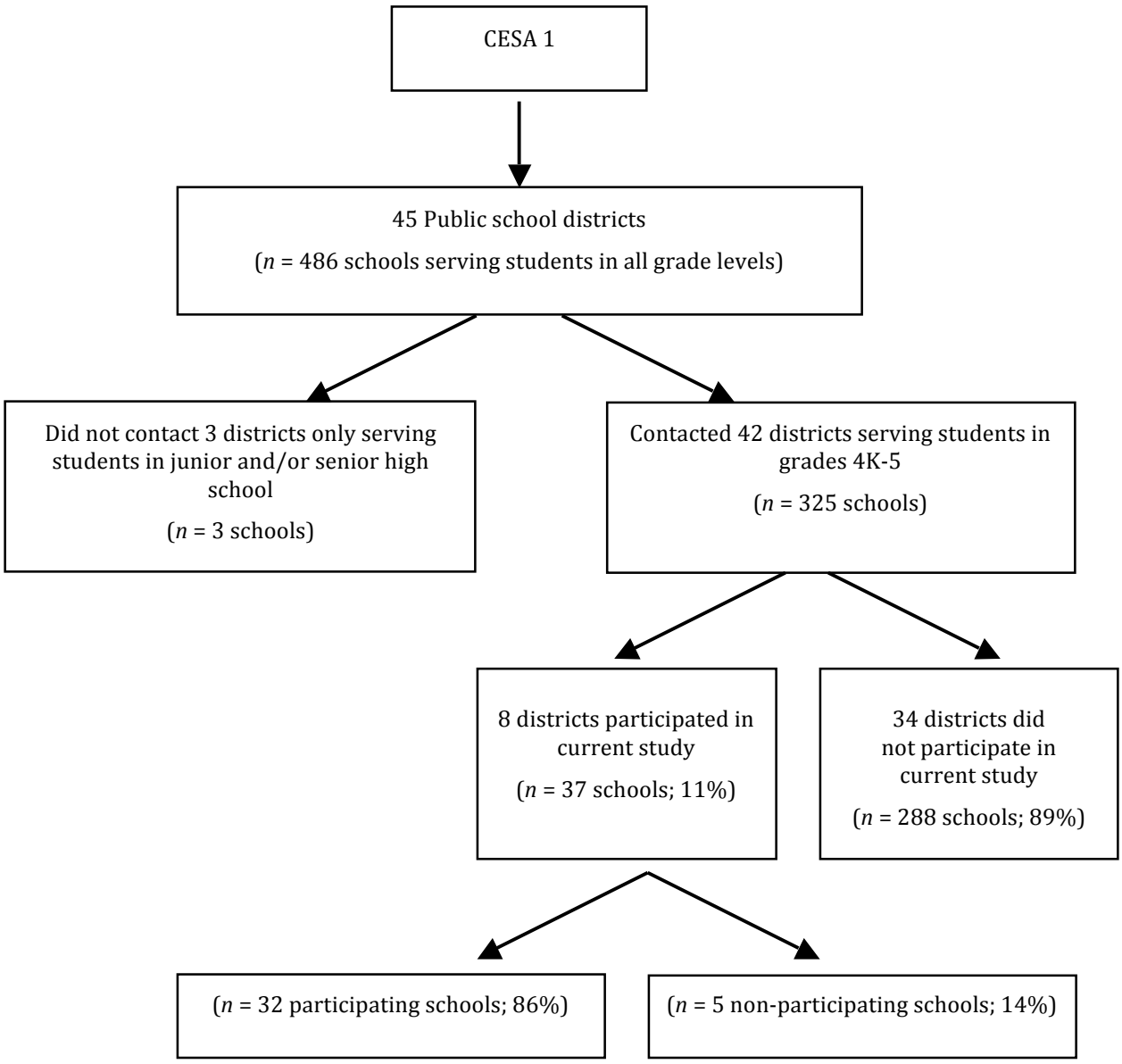

Figure 2. Participating schools flow chart.

Eight school districts (19% of eligible districts) provided consent to collect data in some or all of their elementary schools. Six were located in suburban settings, one in a rural setting, and one included schools in urban, suburban, and rural settings. There were 37 schools total across the eight districts; of these, five (14%) did not participate. The five non-participating

schools were distributed across two districts and included four traditional public schools and one charter school.

A total of 684 teachers were contacted to participate in the study; 217 general education (n = 189; 87%) and special education teachers (n = 28; 13%) across 32 schools completed the *TP-RtI Survey*. Eight participants, however, were excluded from data analyses. Two were excluded because they omitted entire subscales, and six were excluded because they had not received any professional development related to RtI. Consequently, the final sample size was 209, consisting of 182 (87%) general education teachers and 27 (13%) special education teachers. Table 2 provides information on the participant sampling frame, including the total number of 4K-5 schools, general education teachers, and special education teachers in CESA 1 and in the participating districts.

Demographic information for CESA 1 school districts was obtained from the Wisconsin Information System for Education on the Wisconsin DPI website. Information on (a) student enrollment, (b) economic status, (c) race/ethnicity, (d) gender distribution, (e) disability status, and (f) English language learner/Limited English proficient (ELL/LEP) status is presented in Tables 3 and 4. Student demographic data were compared between participating and non-participating schools using chi-square tests (Table 4). There were significant differences in economic status ($p < .001$), race/ethnicity ($p < .001$), disability status ($p < .001$), and ELL status ($p < .001$). Specifically, there were fewer students who were eligible to receive free or reduced-price lunch, more white students compared to students of color, fewer students with disabilities, and more ELL/LEP students in participating schools compared to non-participating schools.

Table 2

Participant Sampling Frame (n = 217)

	CESA 1		Participating Districts															
	n	%	District A		District B		District C		District D		District E		District F		District G		District H	
Schools			*n*	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%
	325		5		3		1		15		5							
Total	32	9.8	5	100	1	33.3	1	100	12	80	5		1		2		5	
Participating	293	90.2	0	100	2	66.7	0	0	3	20	0	100	1	100	2	100	5	100
Non-participating											0	0	0	0	0	0	0	0
General education teachers																		
Total	5,269		120		78		22		242									
Contacted	583	11.1	120	100	25	32.1	22	100	184	76	74		14		55		91	
											74	100	12	85.7	55	100	91	100
	189	32.4	31	25.8	7	28	21	95.5	48	26.1								
Participating*	394	67.6	89	74.2	18	72	1	4.5	136	73.9	11	14.9	7	58.3	8	14.5	56	61.5
Non-participating*											63	85.1	5	41.7	47	85.5	35	38.5
Special education teachers																		
Total	1,506		19		6		7		50									
Contacted	101	6.7	19	100	0	0	7	100	40	80	16		0		9		11	
											16	100	0	0	9	100	10	90.9
	28	27.7	6	31.6	0	0	6	85.7	6	15	2							
Participating*	73	72.3	13	68.4	0	0	1	14.3	34	85		12.5	0	0	2	22.2	6	60
Non-participating*											14	87.5	0	0	7	77.8	4	40

Note: Refers to schools and teachers serving students in grades 4K-5

*Out of the teachers who were contacted to participate in the study

Table 3

Demographic Information on Students in Grades 4K-5 in Participating Schools

	Participating Districts															
	District A		District B		District C		District D		District E		District F		District G		District H	
	n	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%
Student Enrollment	2,657		420		487		4,838		1,852		261		1,279		2,205	
Economic status																
Disadvantaged*	1,873	70.5	219	52.1	147	30.2	1,915	39.6	252	13.6	1	0.4	176	13.8	308	14.0
Not Disadvant.	784	29.5	201	47.9	340	69.8	2,923	60.4	1,600	86.4	260	99.6	1,103	86.2	1,897	86.0
Race/ethnicity																
American Indian	11	0.4	2	0.5	2	0.4	12	0.2	15	0.8	0	0.0	0	0.0	9	0.4
Asian	363	13.7	0	0.0	6	1.2	234	4.8	204	11.0	3	1.1	93	7.3	118	5.4
Black	82	3.1	5	1.2	13	2.7	217	4.5	49	2.6	1	0.4	21	1.6	54	2.4
Hispanic	166	6.2	66	15.7	20	4.1	1,098	22.7	116	6.3	3	1.1	74	5.8	113	5.1
Pacific Islander	3	0.1	0	0.0	3	0.6	5	0.1	0	0.0	0	0.0	0	0.0	2	.09
White	1,950	73.4	347	82.6	443	91.0	3,114	64.4	1,453	78.5	240	92.0	1,025	80.1	1,836	83.3
Two or More	82	3.1	0	0.0	0	0.0	158	3.3	15	0.8	14	5.4	66	5.2	73	3.3
Gender distribution																
Female	1,320	49.7	194	46.2	234	48.0	2,352	48.6	931	50.3	120	46.0	649	50.7	1,038	47.1
Male	1,337	50.3	226	53.8	253	52.0	2,486	51.4	921	49.7	141	54.0	630	49.3	1,167	52.9
Disability status																
With	320	12.0	59	14.0	74	15.2	662	13.7	160	8.6	31	11.9	93	7.3	252	11.4
Without	2,337	88.0	361	86.0	413	84.8	4,176	86.3	1,692	91.4	230	88.1	1,186	92.7	1,953	88.6
ELL status																
ELL/LEP	2,449	92.2	46	11.0	7	1.4	598	12.4	144	7.8	0	0.0	10	0.8	65	2.9
English Prof.	208	7.8	374	89.0	480	98.6	4,240	87.6	1,708	92.2	261	100	1,269	99.2	2,140	97.1

*Students who are eligible to receive free or reduced-price lunch

Table 4

Demographic Information on Students in Grades 4K-5 in CESA 1 Compared to Participating Schools and Non-Participating Schools

	CESA 1		Participating Schools		Non-Participating Schools		Chi-Square p-value
	n	%	*n*	%	*n*	%	
Student Enrollment	119,370		13,999		105,371		
Economic status							< .001
Disadvantaged*	60,911	51	4,891	34.9	56,020	53.2	
Not Disadvantaged	58,459	49	9,108	65.1	49,351	46.8	
Race/ethnicity							< .001
American Indian	602	0.5	51	0.36	551	0.5	
Asian	5,460	4.6	1,021	7.3	4,439	4.2	
Black	27,795	23.3	442	3.2	27,353	26.0	
Hispanic	21,624	18.1	1,656	11.8	19,968	19.0	
Pacific Islander	103	0.09	13	0.09	90	0.9	
White	60,890	51	10,408	74.3	50,482	47.9	
Two or More	2,896	2.4	408	2.9	2,488	2.4	
Gender distribution							0.634
Female	58,082	48.7	6,838	48.8	51,244	48.6	
Male	61,288	51.3	7,161	51.2	54,127	51.4	
Disability status							< .001
With	16,895	14.2	1,651	11.8	15,244	14.5	
Without	102,475	85.8	12,348	88.2	90,127	85.5	
ELL status							< .001
ELL/LEP	13,095	11	3,319	23.7	9,776	9.3	
English proficient	106,275	89	10,680	76.3	95,595	90.7	

*Students who are eligible to receive free or reduced-price lunch

Participant Characteristics

The first set of survey items was designed to obtain background information about the respondents and their experience with implementing RtI, including (a) current job description; (b) years of experience in education; (c) highest degree earned; (d) level of RtI implementation; (e) support from the school's leadership team; (f) training related to RtI; and (h) knowledge about RtI. Table 5 summarizes these respondent characteristics. As shown in the table, the majority of respondents identified themselves as general education teachers (n = 182, 87.1%). Most reported having either 6-10 years of experience (n = 60, 28.7%) or more than 20 years (n = 62, 29.7%); approximately 70% of respondents held a master's degree (n = 145, 69.7%). The majority of respondents indicated their schools were in the process of establishing procedures to implement RtI (n = 122, 58.7%) and rated the level of RtI implementation support provided by the school's leadership team as "somewhat" (n = 87; 41.8%) or "a lot" (n = 72, 34.6%). Finally, over 60% of respondents reported they had received "some" training related to RtI (n = 127, 60.8%), and more than 80% indicated they had "some" knowledge about RtI (n = 167, 80.7%).

Table 5

Teacher Survey Respondent Characteristics (n = 209)

Variable	*n*	%
School district		
District A	35	16.7
District B	7	3.3
District C	26	12.4
District D	51	24.4
District E	13	6.2
District F	7	3.3
District G	8	3.8
District H	62	29.7
Current job description		
General education	182	87.1
Special education	27	12.9
Other	1	0.5
Years in education		
5 years or fewer	20	9.6
6-10 years	60	28.7
11-15 years	34	16.3
16-20 years	33	15.8
Over 20 years	62	29.7
Highest degree earned [a]		
BA/BS	58	27.9
MA/MS	145	69.7
Other	5	2.4
Current level of RtI implementation [a b]		
Theory and research	73	35.1
Establishing procedures	122	58.7
Begun implementation	106	51.0
Full implementation	53	25.5
Leadership support [a]		
Not at all	1	0.5
Very little	13	6.3
Somewhat	87	41.8
A lot	72	34.6
A great deal	35	16.8
Training related to RtI		
Very little	39	18.7
Some	127	60.8
A lot	40	19.1
A great deal	3	1.4
Knowledge about RtI [c]		
No knowledge	1	0.5
Very little knowledge	11	5.3
Some knowledge	167	80.7
Very knowledgeable	28	13.5

[a] n = 208 for this item
[b] Respondents were instructed to select "all that apply"
[c] n = 207 for this item

Instrumentation

The study examined how (a) congruence of beliefs, (b) teacher self-efficacy, (c) amount of experience, and (d) professional development impact teachers' perceptions of RtI using survey methodology. Specifically, participants completed an online measure, *Teacher Perceptions of Response-to-Intervention* (*TP-RtI*) *Survey* (Appendix A), which includes five sections: (a) demographic information; (b) perceptions of RtI; (c) beliefs about teaching and learning; (d) self-efficacy; and (e) professional development related to RtI. Each individual scale in the *TP-RtI Survey* was randomly ordered across participants to control for order effects during data collection.

A feasibility study was conducted in February 2013 to ensure that the survey design and content were clear and easily interpretable. A sample of five teachers and five school psychology graduate students in the University of Wisconsin-Madison School Psychology Program reviewed the instrument, recorded how long it took them to complete the survey, and provided feedback on the survey. The feedback was reviewed and modifications to the survey were made, as necessary, before administering the survey to research participants. The following sections describe the content of the *Teacher Perceptions of Response-to-Intervention Survey* and modifications that were made based on the feasibility study.

Demographic Information

As described previously, Part 1 (*Background Information*) included eight items to obtain information on participant characteristics that aided in the interpretation of the survey results.

Perceptions of Response-to-Intervention

Part 2 included a measure of treatment acceptability of educational innovation.

Treatment acceptability is defined as "judgments by laypersons, clients, and others of whether treatment procedures are appropriate, fair, and reasonable for the problem or client" (Kazdin, 1981, p. 493). In this study, a modified version of the *Abbreviated Acceptability Rating Profile* (AARP; Tarnowksi & Simonian, 1992) was used to assess teachers' levels of acceptability of the RtI model. This scale is an abbreviated version of the *Intervention Rating Profile-15* (IRP-15; Witt & Elliott, 1985), which measures teachers' acceptability of behavioral interventions. The AARP is considered an improvement over the IRP-15 in terms of its simplicity, enhanced readability, and reduced administration time (Tarnowski & Simonian, 1992).

The AARP contains 8 items that measure a unitary factor of treatment acceptability. Participants rated their level of acceptability using a six-point Likert-type rating scale, which ranged from 1 (strongly disagree) to 6 (strongly agree) (Carter, 2010). Total scores were obtained by summing all the items, with higher scores representing greater levels of acceptability (total possible score range = 8-48). In the current study, some wording on the AARP (Tarnowski & Simonian, 1992) was modified to measure teachers' acceptability of both assessment and intervention procedures within an RtI model; this modification was necessary because the AARP focuses solely on the acceptability of treatment interventions (e.g., "RtI" was used instead of "treatment"). Additionally, given that the AARP is a treatment acceptability measure of behavioral interventions, the wording on some of the items was expanded to include both academic and behavioral domains to be consistent with an RtI model (e.g., "students' academic and behavior needs" was used instead of "child's behavior").

Tarnowski and Simonian (1992) conducted a principal components analysis (PCA) on the AARP using responses from a sample of 60 parents whose children were seen for pediatric outpatient visits. Results indicated that the unitary "acceptability" factor accounted for 84.9% of

the variance in respondents' ratings, with item loadings ranging from .89 to .96. Split-half and alpha coefficients were .95 and .97, respectively (Tarnowski & Simonian, 1992). A second PCA was conducted on a different sample of 80 parents to cross-validate the initial sample. The analysis resulted in item loadings ranging from .89 to .98 on a unitary factor that accounted for 90.3% of the variance in respondents' ratings (Carter, 2010). Split-half and alpha coefficients were .97 and .98, respectively. Results from these analyses suggest that the AARP is a reliable and valid instrument for measuring treatment acceptability (Tarnowski & Simonian, 1992).

To give teachers an opportunity to share additional information about their perceptions of RtI, an optional open-ended question was also included. The question asked, "Would you like to share anything else about your impression of RtI?"

Beliefs about Teaching and Learning

Part 3 was designed to measure the extent to which teachers agree with belief statements related to RtI. Specifically, the *Beliefs on RtI Scale* (Castillo et al., 2012) assesses educators' beliefs about RtI practices. The purpose of the scale was to identify commonly-held beliefs among educators that would likely help facilitate or hinder RtI implementation efforts (Castillo et al., 2012). The scale is comprised of 14 items that measure beliefs regarding student learning, the role of data in decision-making, and expectations for the effectiveness of instruction (Castillo et al., 2012). Respondents rated their level of agreement/disagreement using the following response scale: *1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly Agree.* Scores from this scale can be used as indicators of the extent to which educators' beliefs are aligned with RtI practices (Castillo et al., 2012). Higher scores reflect a higher level of congruence between teacher beliefs about teaching and learning and the basic principles underlying RtI.

Items 8 and 9 on the *Beliefs on RtI Scale* were dropped because they focus on whether students with high-incidence disabilities are currently meeting benchmarks and *not* congruence of beliefs (J. Castillo, personal communication, November 29, 2012). Additionally, items 6, 7, and 10 specifically focus on the area of reading. For these items, the phrase, "in reading," was removed so that the item content was applicable to multiple academic subjects, such as reading, writing, and math, as well as behavior. The phrase "additional intervention" was also replaced with "supplemental interventions (e.g., tier 2, tier 3)" and the acronym "SLD" was replaced with "specific learning disability" to clarify the meaning of these terms. Furthermore, the feasibility study revealed that respondents perceived the items in the scale as wordy. Therefore, the items were slightly reworded to reduce administration time while preserving the original content.

A factor analysis was conducted on the *Beliefs on RtI Scale* using the responses from a sample of 2,430 educators (Castillo et al., 2012). Results of the factor analysis suggest that the scale measures three factors, including beliefs about (a) the academic abilities and performance of students with disabilities, (b) data-based decision making, and (c) the function of core and supplemental instruction (Castillo et al., 2012). The three factors collectively accounted for 73% of the common variance in respondents' ratings of the belief statements. Internal consistency estimates, as measured by Cronbach's alpha, for factor 1 ($\alpha = .71$), factor 2 ($\alpha = .78$), and factor 3 ($\alpha = .54$) yielded moderate results (Castillo et al., 2012).

An additional survey item (item 13) was added to the *Beliefs on RtI Scale* as a general indicator of teachers' congruence of beliefs. The item asks teachers to indicate their level of agreement with the statement, "My personal teaching philosophy and practices are well-aligned with RtI." This item, created by the researcher, was modeled after a single survey item used by Guskey (1988) to measure the degree of congruence between teachers' current teaching practices

and a new instructional model (mastery learning). In sum, the scale used in the current study contained 13 items total with a total possible score range of 13-65.

To allow teachers to elaborate on their beliefs about teaching and learning, an optional open-ended question was included. The question asked, "Would you like to share anything else about your beliefs about teaching and learning?"

Teacher Self-Efficacy

Part 4 of the *TP-RtI Survey* includes two measures of teacher self-efficacy beliefs. In the context of implementing RtI, a teacher's efficacy expectation is the belief that he or she is capable of implementing RtI practices to achieve positive student outcomes. Outcome expectancy refers to a teacher's belief that student outcomes are the result of implementing RtI practices. In the current study, teachers' self-efficacy beliefs for implementing RtI practices were measured in an exploratory manner because there was no single scale or combination of scales that had been shown to effectively assess teachers' self-efficacy beliefs specifically for implementing RtI practices when the study was conducted. Therefore, two separate instruments were used to measure the teacher self-efficacy construct. The first measure was the *Personal Efficacy* subscale derived from Soodak and Podell's (1996) *Teacher Efficacy Scale* (TES). This subscale measures teachers' general efficacy expectations related to general teaching practices. The second scale, the *Perceptions of RtI Skills Survey-Revised* (Castillo et al., 2012), measures teachers' specific personal efficacy beliefs related to RtI practices.

Although self-efficacy is comprised of two independent components (Bandura, 1977), efficacy expectation and outcome expectancy, no instrument was available at the time of the study to examine teachers' beliefs about whether student outcomes are attributable to implementing RtI practices. Personal efficacy, however, is a better predictor of teacher actions

than outcome expectancy because the outcomes that teachers anticipate depend largely on their judgment of how they will be able to perform in a given situation (Bandura, 1977). Therefore, the current study focused on measuring teachers' general personal efficacy beliefs or general efficacy expectations and personal efficacy beliefs specific to RtI. A description of each efficacy scale follows.

Teacher Efficacy Scale. The TES (Soodak & Podell, 1996) consists of 34 items that measure teacher self-efficacy beliefs. The scale is comprised of three subscales that measure (a) personal efficacy, (b) teaching efficacy, and (c) outcome efficacy, as identified by factor analysis. The *Personal Efficacy* subscale (factor 1) measures a teacher's belief about his or her ability to perform the actions needed to promote learning or manage student behavior successfully (i.e., efficacy expectations). The *Teaching Efficacy* subscale (factor 2) measures a teacher's belief that teaching can overcome the effects of outside influences (e.g., the influence of the home). The *Outcome Efficacy* subscale (factor 3) measures a teacher's belief that his or her teaching skills lead to desired student outcomes (i.e., outcome expectancy). Respondents were asked to indicate the degree to which they agree or disagree with the survey items using the following response scale: *1 = Strongly Disagree; 2 = Moderately Disagree; 3 = Disagree Slightly More than Agree; 4 = Agree Slightly More than Disagree; 5 = Moderately Agree; 6 = Strongly Agree.*

A principal components factor analysis was conducted on the survey using the responses from a sample of 310 preschool, elementary, junior high, and high school teachers (Soodak & Podell, 1996). Results from the analysis revealed that the three factors are essentially uncorrelated, with Pearson *r* coefficients of -.13 (factors 1 and 2), .19 (factors 1 and 3), and .00 (factors 2 and 3). An orthogonal varimax rotation was selected, and a factor loading cutoff of .35

was used to identify items that contribute significantly to each factor. Factor 1 (Personal Efficacy) consists of 11 significant items, factor 2 (Teaching Efficacy) consists of 12 significant items, and factor 3 (Outcome Expectancy) consists of 4 significant items. Using these items, reliability of the three factors was found to be .80 (factor 1), .73 (factor 2), and .70 (factor 3) using Cronbach's alpha. Reliability was also found to be .77 (factor 1), .75 (factor 2), and .76 (factor 3) using the split-half method (Soodak & Podell, 1996).

Both factor 1 (Personal Efficacy) and factor 3 (Outcome Efficacy) from the TES are consistent with Bandura's (1977) notion of efficacy expectations and outcome expectancy as independent aspects of self-efficacy. Only the *Personal Efficacy* subscale (items 2, 9, 13, 16, 22, 23, 25, 26, 29, 30, 34; 11 items total) was included in the current study because efficacy expectations are a better predictor of teacher actions (Bandura, 1977). A strength of the *Personal Efficacy* subscale that sets it apart from other self-efficacy instruments is that it measures both the academic and behavioral domains of the RtI model by assessing teachers' beliefs about their ability to manage student behavior and teach academic skills, whereas other self-efficacy instruments focus solely on academics.

Slight modifications were made to the wording on some items in the TES. For example, the phrase "him" on item 25 was replaced with "him/her" to reduce gender bias. Additionally, on item 26, the phrase "I am able to gain control" was replaced with "there is little I can do to gain control" so that item 30 was not the only negatively worded item in the scale. Results from the feasibility study also revealed that respondents perceived some items on the *Personal Efficacy* subscale as wordy. As a result, the wording of some items was slightly modified. For example, "If a student becomes disruptive and noisy, I know some techniques to redirect him/her quickly"

was used instead of "If a student in my class becomes disruptive or noisy, I feel assured I know some techniques to redirect him quickly."

To allow teachers to share more about their general personal efficacy beliefs, an optional open-ended question was included. The question asked, "Would you like to share anything else about your self-efficacy beliefs?"

Perceptions of RtI Skills Survey-Revised. The *Perceptions of RtI Skills Survey-Revised* (Castillo et al., 2012) is a self-rating scale that assesses educators' perceptions of the skills they possess to implement RtI practices. The survey items examine educators' skills in applying RtI practices to academic and behavior content, as well as skills in data manipulation and technology use (Castillo et al., 2012). The survey contains 50 items organized within 16 stems reflecting core RtI skills. Each item was rated using a 5-point scale: *1 = I do not have the skill at all; 2 = I have minimal skills in this area; need substantial support to use it; 3 = I have this skill, but still need some support to use it; 4 = I can use this skill with little support; 5 = I am highly skilled in this area and could teach others to use this skill* (Castillo et al., 2012). Higher scores reflect a higher level of personal efficacy for implementing various aspects of RtI.

A common factor analysis was conducted using the responses from a sample of 2,184 educators (Castillo et al., 2012). Results of the factor analysis revealed that the survey taps into educators' perceived skills in three domains: (a) applying RtI to academic content, (b) applying RtI to behavior content, and (c) manipulating data and using technology to assist in data-based decision making. The three factors collectively accounted for 80% of the common variance in participant ratings of their perceived skills. Additionally, internal consistency reliability estimates, as measured by Cronbach's alpha, for factor 1 ($\alpha = .98$), factor 2 ($\alpha = .97$), and factor 3 ($\alpha = .94$), yielded consistently high results (Castillo et al., 2012).

Teachers who participated in the feasibility study reported that the *Perceptions of RtI Skills Survey-Revised* was too long (50 items) and took too much time to complete. Given that factor 3 (i.e., skills in manipulating data and using technology) represents skills sometimes implemented by individuals other than classroom teachers and/or through the use of computer software programs (e.g., "Graph and display student and school data"), the items from factor 3 (14A, 14B, 14C, 14D, 14E, 17A, 17B) were removed from the scale used in the current study. The researcher further reduced the scale in the current study to 10 total items (total possible score range of 10-50), which represent the essential skills for implementing RtI for academic and behavior content from factors 1 and 2.

To allow teachers to elaborate about their personal efficacy for implementing RtI, an optional open-ended question was included. The question asked, "Would you like to share anything else about the skills you possess to implement RtI practices?"

Amount of Experience

Participants were asked to report how many years they have worked in the field of education. The response options for years of experience align with Hargreaves' (2005) three career stages: early career stage (5 years or less of teaching experience), mid-career stage (6-20 years of teaching experience), and later career stage (over 20 years of teaching experience). In this study, the mid-career response option was broken down into three separate categories to allow for a more sensitive measure of amount of experience.

Professional Development

Professional development related to RtI was measured using a PD scale that consisted of two subscales created by the researcher. The first subscale (*Characteristics of PD*) included four items. Items 1-3 measured three separate characteristics of high-quality PD, and item 4

represented a broad quality rating of PD. Specifically, using a 5-point Likert rating scale (*1 = not at all; 5 = a great deal*), respondents rated the extent to which their PD had been ongoing, linked to their individual goals, school-based, and adequate to support implementation. The second PD subscale (*Components of PD*) included four items that asked respondents to rate the extent to which their RtI PD included four separate evidence-based components. Using a 5-point scale (*1 = not at all; 5 = a great deal)*, respondents rated the extent to which their PD had included theory and discussion, demonstration, practice with feedback, and coaching (Joyce & Showers, 2002).

To allow teachers to share additional information about the professional development they had received, an optional open-ended question was included. The question asked, "Would you like to share anything else about the professional development you have received related to RtI?"

Table 6 summarizes the constructs, measures, number and ratings for items, and total possible score range for each research variable in the current study.

Table 6

Summary of Measures

Construct	Measure	Items	Possible Score Range
Perceptions of RtI	Modified *Abbreviated Acceptability Rating Profile* (Tarnowski & Simonian, 1992)	8 items rated from 1 (strongly disagree) to 6 (strongly agree)	8-48
Congruence of beliefs	Modified *Beliefs on RtI Scale* (Castillo et al., 2012)	13 items rated from 1 (strongly disagree) to 5 (strongly agree)	13-65
Personal efficacy beliefs	Modified *Personal Efficacy Subscale* (Soodak & Podell, 1996)	11 items rated from 1 (strongly disagree) to 6 (strongly agree)	11-66
	Modified *Perceptions of RtI Skills Survey-Revised* (Castillo et al., 2012)	10 items rated from 1 (no skill) to 5 (highly skilled)	10-50
Amount of experience	*Background Information Scale*	1 item (item 3) rated from 1 (5 years or fewer) to 5 (Over 20 years)	1-5
Professional development	*Characteristics of PD Subscale*	4 items (items 1-4) rated from 1 (not at all) to 5 (a great deal)	4-20
	Components of PD Subscale	4 items (items 5-8) rated from 1 (not at all) to 5 (a great deal)	4-20
	PD Composite Scale	8 items from the two PD subscales	8-40

Procedures

Data collection occurred over a nine-month period, beginning in April 2013 and concluding in December 2013. Subsequent to receiving approval from the University of Wisconsin-Madison Institutional Review Board (Appendix B) the researcher obtained consent

from district administrators and school principals to recruit teachers in their schools. Principals helped the researcher identify teachers who met the study's selection criteria and provided the researcher with teachers' e-mail addresses. Principals explained to prospective teacher participants that the reason for participating in the study was to inform the district's professional development plans related to RtI by targeting specific topics to meet their needs. Involving the school principal was intended to enhance teacher buy-in for participation in data collection.

After principals informed their staff about the study, the researcher sent all eligible teachers an electronic consent form and link to the *TP-RtI Survey* via e-mail. All participants received electronic directions for completing the survey. These directions were intended to support standardized survey administration procedures across participants. Participants were given four weeks to complete the survey. Four weeks after the initial surveys were sent, teachers were sent a reminder e-mail with another link to the survey asking them to consider participating in the study. These teachers were then given two more weeks to complete the survey. After the data were collected, the researcher analyzed the survey results and shared a summary of each district's aggregate data with the district administrator and school principals. No identifying information was shared with district or school administrators to assure participant confidentiality. All survey respondents also had the opportunity to participate in a raffle to win a $50 American Express gift card. The last item of the electronic survey gave teachers the option of providing their name and contact information to participate in the raffle. Participation in the raffle was entirely voluntary.

In sum, a total of 684 teachers were contacted to participate in the study across eight school districts and 32 elementary schools. A total of 217 teachers partially or fully submitted

surveys. Only 209 surveys were included in the analysis. Therefore, the total participation rate for the current study was 30.6%.

Design and Data Analyses

The data analysis plan included two preliminary procedures and analyses to address the main research questions. Each procedure is described below.

Intraclass Correlation (ICC)

Given that district affiliation may have impacted teachers' perceptions of RtI, an intraclass correlation (ICC) was calculated to determine the proportion of variance in teacher ratings that was accounted for by district-level effects. If the ICC had indicated there was a substantial amount of district-level variance and less teacher-level variance, a two-level (Level 1 teacher, Level 2 district) hierarchical linear model (HLM) would have been used to account for within-district correlation. However, an ICC of .0005 indicated that district-level effects accounted for a negligible proportion of variance in teacher ratings. Therefore, a multilevel model was not necessary. Consequently, linear regression analyses were used to address the research questions. Table 7 displays the results from the null model.

Table 7

Estimation of Variance Components for the Two-Level Null Model

Random effect	Std. Deviation	Variance component	d.f.	χ^2	*p*
INTRCPT1, u_0	0.12590	0.01585	7	7.62352	0.367
Level-1, *r*	5.76124	33.19187			

Principal Components Analysis (PCA)

A principal components analysis using orthogonal varimax rotation was conducted on the *Personal Efficacy* subscale and *Perceptions of RtI Skills Survey-Revised*. The purpose of this

data-reduction procedure was to identify which items from each subscale cluster together. As mentioned previously, this study measured self-efficacy in an exploratory manner. This analysis was helpful in determining the covariation in teachers' general personal efficacy beliefs and personal efficacy beliefs specifically related to RtI, as these constructs had not been analyzed together. The linear regression analyses were conducted using the factor scores retained from the PCA for the personal efficacy variables.

Analyses for Research Questions 1 and 2

Multiple linear regression was used to examine the extent to which (a) congruence of beliefs, (b) teacher self-efficacy, (c) amount of experience, and (d) professional development account for teacher perceptions of RtI reform (Research Question 1). Participants' scores on the *AARP* were the outcome variable (possible range = 8-48) and scores on the *PD Composite Scale* were the professional development variable (possible range = 8-40). Table 6 displays the scores used for the other explanatory variables in the model.

Multiple linear regression was also used to examine the extent to which (a) years of experience and (b) professional development affect teacher self-efficacy beliefs (Research Question 2). Two separate multiple regression models were run. One analysis used factor 1 scores from the PCA as the outcome variable, and the other analysis used factor 2 scores from the PCA as the outcome variable. Participants' scores on the *PD Composite Scale* were used for the professional development variable and scores on item 3 of the *Background Information Scale* were used for the experience variable (Table 6).

Research Question 3 Analysis

A four-step mediation analysis procedure (Baron & Kenny, 1986) was used to examine the extent to which self-efficacy beliefs mediate the relationship (a) between years of experience

and teacher perceptions of reform, and (b) between professional development and teacher perceptions of reform. For the first mediation analysis, the first three steps included a regression analysis with (a) experience predicting teacher perceptions, (b) experience predicting self-efficacy beliefs, and (c) self-efficacy beliefs predicting teacher perceptions of RtI. If one or more of the first three steps did not reveal significant relationships, then mediation was assumed to be unlikely. If the first three steps revealed significant relationships, then a multiple regression analysis was conducted, with amount of experience and self-efficacy beliefs as predictor variables and teacher perceptions of RtI as the outcome variable.

Model/Step 1

Perceptions of RtI = $\alpha + \beta_1$*Experience + ε

Model/Step 2

Self-Efficacy = $\alpha + \beta_2$*Experience + ε

Model/Step 3

Perceptions of RtI = $\alpha + \beta_3$*Self-Efficacy + ε

Model/Step 4

Perceptions of RtI = $\alpha + \beta_4$*Experience + β_5*Self-Efficacy + ε

If amount of experience was no longer significant when self-efficacy beliefs were controlled, then the results indicated full mediation. In contrast, if experience and self-efficacy beliefs significantly predicted teacher perceptions of RtI and the attenuation was large (i.e., $|(ß_4-ß_1) / ß_1| > 10\%$), then the results supported partial mediation. Two separate multiple regression analyses were run. One analysis used factor 1 scores from the PCA as the mediator variable, and the other analysis used factor 2 scores from the PCA as the mediator variable. Participants' scores on the

AARP were the outcome variable and scores on item 3 of the *Background Information Scale* were the explanatory variable (Table 6).

A similar four-step mediation analysis procedure was used to examine the extent to which self-efficacy beliefs mediate the relationship between professional development and teacher perceptions of reform. Participants' scores on the *AARP* were the outcome variable and scores on the *PD Composite Scale* were the professional development variable (Table 6).

Model/Step 1

Perceptions of RtI = $\alpha + \beta_1$*Professional Development + ε

Model/Step 2

Self-Efficacy = $\alpha + \beta_2$*Professional Development + ε

Model/Step 3

Perceptions of RtI = $\alpha + \beta_3$*Self-Efficacy + ε

Model/Step 4

Perceptions of RtI = $\alpha + \beta_4$*Professional Development + β_5*Self-Efficacy + ε

Research Question 4 Analysis

Finally, multiple linear regression was used to examine the extent to which (a) three characteristics of effective PD and (b) four evidence-based components of PD account for teacher perceptions of reform. The coefficient of multiple determination (R^2) from the adjusted model was used to measure the proportion of the total variation in teacher perceptions of RtI that was explained by all three PD characteristics and four PD components together (Agresti & Finlay, 2009). Additionally, the adjusted standardized regression coefficients were used to determine which specific explanatory variables were significant predictors of teacher perceptions of RtI, while controlling for the other explanatory variables in the model. Participants' scores on

the *AARP* were the outcome variable and scores on the *Characteristics of PD Subscale* and *Components of PD Subscale* were the PD variable.

CHAPTER 4

Results

Preliminary Analyses

Three preliminary analyses were conducted, including (a) a missing data procedure, (b) principal components analysis, and (c) inter-correlations among all subscales of the *TP-RtI Survey*. The results of each preliminary analysis are reported below, prior to the major study analyses.

Missing Data Procedure

Missing data procedures were selected post-hoc to address the issue of unanswered survey items. Only a small percentage of data was missing across study variables (26 participants were missing 32 items). Table 8 summarizes the number of participants with missing data and the number of missing items from each subscale. A total of 26 (12.4%) participants had missing data with 21 participants missing only one item (10.0%), four participants missing two items (1.9%), and one participant missing three items (0.5%). An item substitution method (IMS), which replaces a missing value with the mean for the item from all individuals completing the same item, was used for Parts 2-5 of the *TP-RtI Survey*. According to Downey and King (1998), the IMS method provides a good representation of missing data on Likert scales when both the number of respondents with missing items and items missing within scales is 20% or less. In this study, 12.4% of participants had missing data, and only two participants were missing 25% of items within the same subscale (Part 2). Downey and King (1998) found that even when more than 20% of items are missing within a scale, the loss of information is small. Therefore, the IMS method was determined to be an appropriate replacement procedure to address the missing data in this study.

Table 8

Summary of Missing Data

Subscale	Participants with Missing Items		Missing Items
	n	%	*n*
Background Information	5	2.4	5
Perceptions of RtI	3	1.4	5
Beliefs About Teaching & Learning	8	3.8	8
Self-Efficacy Beliefs (General)	6	2.9	7
Self-Efficacy Beliefs (Related to RtI)	5	2.4	5
Professional Development	2	1.0	2
Total	26	12.4	32

Although the "Don't Know/Not Sure" response option in Part 5 of the *TP-RtI Survey* did not represent missing values, these responses (*n* = 9 items, 4.3%; *n* = 4 participants, 1.9%) were treated as missing data because they did not fit with the ordinal scaling of the other response options (i.e., 1 = not at all; 5 = a great deal). Therefore, an IMS method was also used to replace the nine "Don't Know/Not Sure" responses in Part 5.

Principal Components Analysis

The PCA was conducted using the 11 items from the *Personal Efficacy* subscale and 10 items from the *Perceptions of RtI Skills Survey-Revised* subscale. Visual inspection of the scree plot led to a natural threshold between factors 2 and 3 (Figure 3), indicating that two factors accounted for most of the variance in teachers' perceptions of RtI. Therefore, factors 1 and 2 were retained. Rotated factor patterns ranged from .00 to .84 (Table 9). Factor 1 included strong positive loadings ($\geq$ .70) for the 10 items of the *Perceptions of RtI Skills Survey-Revised* subscale. This factor appeared to represent personal efficacy beliefs specific to RtI. Factor 2

included moderate to strong positive factor loadings (≥ .30) for the 11 items of the *Personal Efficacy* subscale. This factor appeared to represent general personal efficacy beliefs. Factors 1 and 2 were used as separate variables in subsequent analyses. The score range for factor 1 was -3.7 to 2.0 and the score range for factor 2 was -2.6 to 2.3.

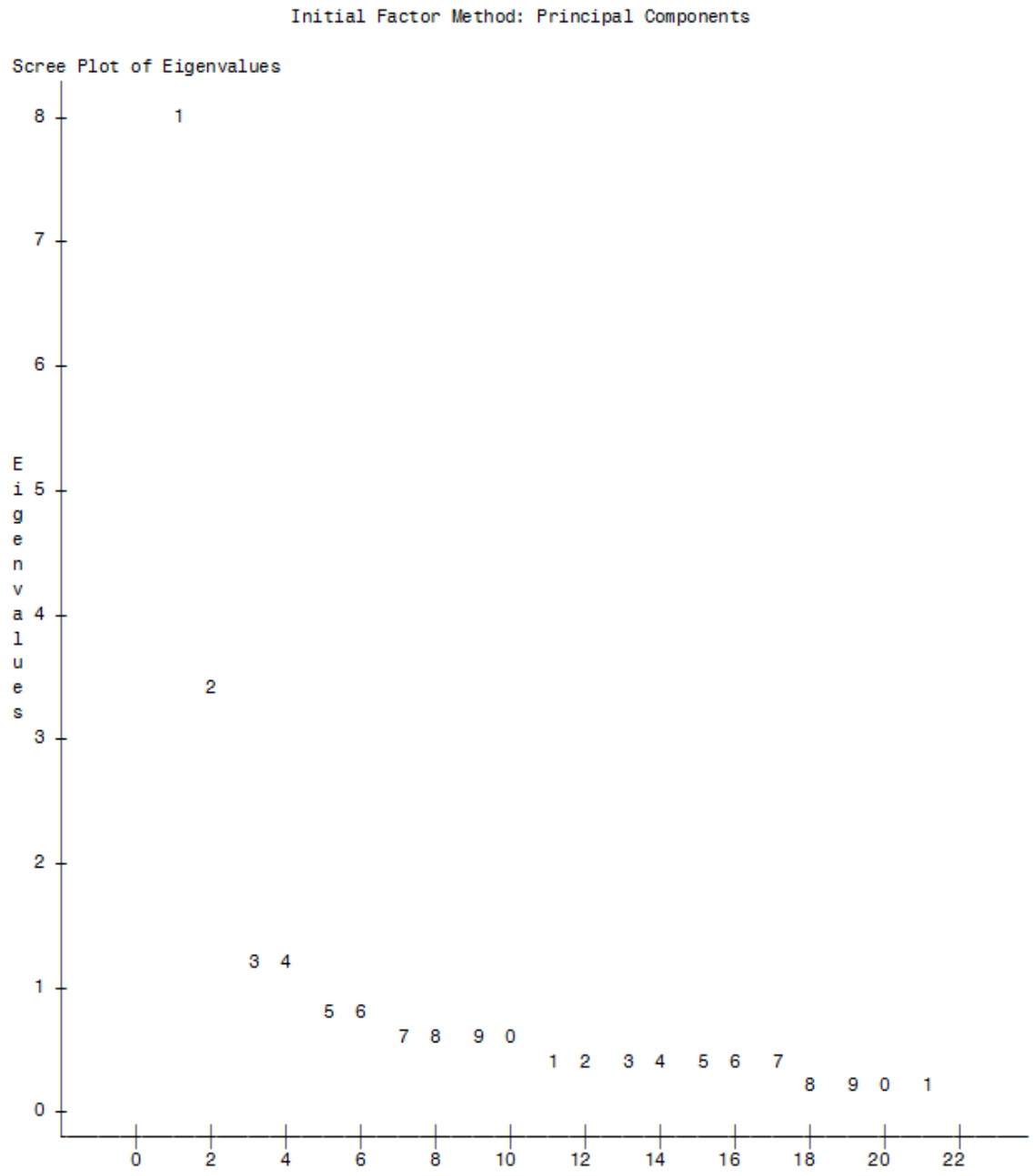

Figure 3. Scree plot of summed self-efficacy scores.

Table 9

PCA Rotated Factor Pattern for Summed Self-Efficacy Scores

Subscale	Item	Factor 1	Factor 2
Personal Efficacy Subscale	1	.15	**.68**
	2	.31	**.66**
	3	.14	**.76**
	4	.17	**.76**
	5	.14	**.76**
	6	.26	**.72**
	7	.08	**.79**
	8	.00	.33
	9	.30	**.40**
	10	.05	**.64**
	11	.11	**.56**
Perceptions of RtI Skills Survey-Revised	1	**.73**	.15
	2	**.81**	.10
	3	**.84**	.10
	4	**.78**	.05
	5	**.83**	.15
	6	**.77**	.15
	7	**.74**	.24
	8	**.77**	.21
	9	**.70**	.14
	10	**.75**	.21

* Items in bold indicate rotated factor loadings greater than 0.35.

Pearson Correlations

Pearson correlations were conducted to determine the pattern of inter-correlations among the subscales on the *TP-RtI Survey* (Table 10). A Pearson correlation of .408 ($p < .001$) revealed a significant, moderate correlation between the *Personal Efficacy* subscale and *Perceptions of RtI Skills Survey-Revised* in Part 4 of the *TP-RtI Survey*. Consistent with the theoretical framework proposed in the current study, congruence of beliefs, RtI efficacy beliefs, and PD were significantly, moderately correlated with teachers' perceptions of RtI ($p < .001$). Additionally, Pearson correlations of .418 (factor score) and .443 (raw score) indicated significant moderate correlations between RtI efficacy beliefs and PD specific to RtI ($p < .001$).

Interestingly, congruence of beliefs was also significantly, moderately correlated with PD (.317; $p < .001$).

Table 10

Pattern of Inter-correlations Among Subscales on the TP-RtI Survey

	Perceptions of RtI	Congruence of Beliefs	General Personal Efficacy[a]	RtI Personal Efficacy[a]	Professional Development	Experience	General Personal Efficacy[b]	RtI Personal Efficacy[b]
Perceptions of RtI	1.000							
Congruence of Beliefs	.647[c]	1.000						
General Personal Efficacy[a]	.196[c]	.087	1.000					
RtI Personal Efficacy[a]	.363[c]	.268[c]	.000	1.000				
Professional Development	.399[c]	.317[c]	.140	.418[c]	1.000			
Experience	.028	.048	.081	-.011	.098	1.000		
General Personal Efficacy[b]	.275[c]	.151	.962[c]	.229[c]	.223[c]	.079	1.000	
RtI Personal Efficacy[b]	.398[c]	.282[c]	.193[c]	.979[c]	.443[c]	.004	.408[c]	1.000

[a] Factor score from PCA
[b] Raw score
[c] $p < .01$

Main Results

Descriptive Statistics

Table 11 displays the descriptive statistics for all scales of the *TP-RtI Survey*. The self-efficacy scores presented in the table are the raw summed scores from the *Personal Efficacy* subscale and *Perceptions of RtI Skills Survey-Revised* rather than the factor scores from the PCA. Descriptive statistics for the experience in education variable are presented in Table 5.

Table 11

Descriptive Statistics

Scale	Mean	Std. Deviation	Median	Range
Abbreviated Acceptability Rating Profile	37.96	5.76	39.00	19-48
Beliefs on RtI Scale	49.58	5.30	50.00	35-65
Personal Efficacy Subscale	57.60	5.97	58.00	36-66
Perceptions of RtI Skills Survey-Revised	32.99	7.88	34.00	14-50
Professional Development Composite Scale	21.99	6.54	22.00	8-40

Research Question 1: *To what extent do (a) congruence of beliefs, (b) teacher self-efficacy, (c) amount of experience, and (d) professional development account for teacher perceptions of RtI reform?*

Congruence of beliefs, general personal efficacy, personal efficacy related to RtI, and professional development were significantly associated with teachers' perceptions of RtI in both the unadjusted and adjusted models ($p < .05$, Table 12). Years of experience was not significantly associated with teachers' perceptions of RtI in either the unadjusted ($p = .824$) or the adjusted ($p = .842$) models. Multivariate results revealed that a standard deviation (SD) increase in congruence of beliefs was associated with a .556 SD increase in teachers' perceptions of RtI (unstandardized ß = .605, $p < .001$). Increasing general personal efficacy and personal

efficacy related to RtI factor scores by one SD was associated with a .119 and .160 SD increase in teacher perceptions of RtI (unstandardized ß = .683, p = .024 and unstandardized ß = .924, p = .005, respectively). Finally, a one SD increase in professional development was associated with a .147 SD increase in teachers' perceptions of RtI (unstandardized ß = .130, p = .011). The final adjusted model demonstrated satisfactory model fit ($F = 24.75$, $p < .001$), with the covariate set accounting for 49.8% of the variance in teachers' perceptions of RtI.

Table 12

Regression Analysis with Congruence of Beliefs, General Personal Efficacy Beliefs, Personal Efficacy Beliefs Related to RtI, Experience, and Professional Development Predicting Teachers' Perceptions of RtI

	Unadjusted					*Adjusted*				
	Unstandardized		**Standardized**			**Unstandardized**		**Standardized**		
	Beta	**SE**	**Beta**	**SE**	**p-value**	**Beta**	**SE**	**Beta**	**SE**	**p-value**
Intercept						4.774	3.001			.113
Congruence of Beliefs	.704	.058	.647	.053	< .001	.605	.059	.556	.054	< .001
General Personal Efficacy	1.128	.393	.196	.068	.005	.683	.300	.119	.052	.024
RtI Personal Efficacy	2.093	.373	.363	.065	< .001	.924	.325	.160	.057	.005
Professional Development	.352	.056	.399	.064	< .001	.130	.051	.147	.058	.011
Experience										
5 years or fewer	-.043	1.491	-.002	.076	.977	.541	1.073	.028	.055	.615
6-10 years	-.801	1.050	-.063	.083	.446	.450	.764	.035	.060	.556
11-15 years	-1.150	1.237	-.074	.079	.354	.029	.894	.002	.057	.974
16-20 years	-1.138	1.249	-.072	.079	.364	.991	.934	.063	.059	.290
Over 20 years			reference					reference		

R^2	**Adj. R^2**	**F**	**p-value**
.498	.477	24.75	< .001

Research Question 2: *To what extent does (a) amount of experience and (b) professional development affect self-efficacy beliefs?*

Personal Efficacy Beliefs Related to RtI

Professional development was significantly associated with personal efficacy beliefs related to RtI in both the unadjusted and adjusted models ($p < .05$, Table 13). The unadjusted model indicates that teachers with 16-20 years of experience had significantly lower personal efficacy beliefs related to RtI compared to teachers with over 20 years of experience ($p = .020$). However, experience was not significantly associated with personal efficacy beliefs related to RtI in the adjusted model ($p > .05$). Multivariate results revealed that a one SD increase in professional development was associated with a .410 SD increase in teachers' personal efficacy beliefs related to RtI (unstandardized ß = .063, $p < .001$). The adjusted model demonstrated satisfactory model fit ($F = 9.73$, $p < .001$), with the covariate set accounting for 19.3% of the variance in teachers' personal efficacy beliefs related to RtI.

General Personal Efficacy Beliefs

Professional development was significantly associated with general personal efficacy beliefs in both the unadjusted and adjusted models ($p < .05$, Table 14). Similarly, both unadjusted and adjusted models indicate that teachers with 16-20 years of experience had significantly higher general personal efficacy beliefs compared to teachers with over 20 years of experience ($p < .05$). Multivariate results revealed that a one SD increase in professional development was associated with a .153 SD increase in teachers' general personal efficacy beliefs (unstandardized ß = .023, $p = .027$). Compared to teachers with over 20 years of experience, having 16-20 years of experience was significantly associated with a .202 SD increase in general personal efficacy beliefs (unstandardized ß = .553, $p = .010$). The adjusted

model demonstrated satisfactory model fit (F = 3.01, p = .012), with the covariate set accounting for 6.9% of the variance in teachers' general personal efficacy beliefs.

When comparing the two personal efficacy variables, the adjusted models revealed that professional development was more strongly associated with teachers' personal efficacy beliefs related to RtI (standardized b = .410, unstandardized ß = .063, p < .001) compared to their general personal efficacy beliefs (standardized b = .153, unstandardized ß = .023, p = .027).

Table 13

Regression Analysis with Experience and Professional Development Predicting Personal Efficacy Beliefs Related to RtI.

	Unadjusted					*Adjusted*				
	Unstandardized		**Standardized**			**Unstandardized**		**Standardized**		
	Beta	**SE**	**Beta**	**SE**	**p-value**	**Beta**	**SE**	**Beta**	**SE**	**p-value**
Intercept						-1.343	.257			< .001
Prof. Development	.064	.010	.418	.063	< .001	.063	.010	.410	.064	< .001
Experience										
5 years or fewer	-.073	.256	-.021	.075	.777	.016	.234	.005	.069	.945
6-10 years	-.051	.180	-.023	.082	.778	.092	.166	.042	.075	.579
11-15 years	-.180	.212	-.067	.079	.398	-.078	.195	-.029	.072	.690
16-20 years	-.503	.214	-.184	.078	.020	-.326	.198	-.119	.072	.101
Over 20 years			reference					reference		

R^2	**Adj. R^2**	**F**	**p-value**
.193	.174	9.73	< .001

Table 14

Regression Analysis with Experience and Professional Development Predicting General Personal Efficacy Beliefs.

	Unadjusted					*Adjusted*				
	Unstandardized		**Standardized**			**Unstandardized**		**Standardized**		
	Beta	**SE**	**Beta**	**SE**	**p-value**	**Beta**	**SE**	**Beta**	**SE**	**p-value**
Intercept						-.572	.276			.039
Prof. Development	.021	.011	.140	.069	.044	.023	.011	.153	.069	.027
Experience										
5 years or fewer	.041	.254	.012	.075	.872	.074	.252	.022	.074	.769
6-10 years	-.171	.179	-.078	.081	.339	-.118	.179	-.053	.081	.510
11-15 years	-.057	.210	-.021	.078	.787	-.019	.209	-.007	.077	.929
16-20 years	.487	.213	.178	.078	.023	.553	.213	.202	.078	.010
Over 20 years			reference					reference		

R^2	**Adj. R^2**	**F**	**p-value**
.069	.046	3.01	.012

Research Question 3: *To what extent do self-efficacy beliefs mediate the relationship between (a) amount of experience and teacher perceptions of reform and (b) professional development and teacher perceptions of reform?*

Experience

The results of the regression analyses that used experience as an explanatory variable are presented in Tables 15 and 16. When personal efficacy beliefs related to RtI were used as the mediator variable, it was found that mediation was unlikely because one or more relationships in the first three steps of the four-step mediation procedure were non-significant. Experience was not significantly associated with perceptions of RtI ($p > .05$, model 1, Table 15). Therefore, a relationship between the explanatory and outcome variables was not established, and step one of the four-step mediation process was not satisfied. Having 16-20 years of experience compared to teachers with over 20 years of experience was the only significant predictor of teachers' personal efficacy beliefs related to RtI (b = -.184, $p = .020$, model 2), only partially establishing a bivariate relationship between the explanatory and mediator variables and partially satisfying step two of the four-step mediation process. Personal efficacy beliefs related to RtI were significantly associated with teachers' perceptions of RtI (b = .363, $p < .001$, model 3), establishing a bivariate relationship between the mediator and outcome variables and satisfying step three of the mediation process.

When general personal efficacy beliefs were used as the mediator variable (Table 16), it was found that mediation was unlikely because one or more relationships in the first three steps of the four-step mediation procedure were non-significant. Experience was not significantly associated with perceptions of RtI ($p > .05$, model 1, Table 15). Therefore, a relationship between the explanatory and outcome variables was not established, and step one of the four-step

mediation process was not satisfied. Having 16-20 years of experience compared to teachers with over 20 years of experience was the only significant predictor of teachers' general personal efficacy beliefs (b = .178, p= .023, model 2), only partially establishing a bivariate relationship between the explanatory and mediator variables and partially satisfying step two of the four-step mediation process. General personal efficacy beliefs was significantly associated with teachers' perceptions of RtI (b = .196, p = .005, model 3), establishing a bivariate relationship between the mediator and outcome variables and satisfying step three of the mediation process.

Professional Development

The results of the regression analyses that used professional development as an explanatory variable are summarized in Tables 17 and 18. When personal efficacy beliefs related to RtI were used as the mediator variable, significant relationships were established in steps 1-3 of the four-step mediation procedure. Professional development was significantly associated with teachers' perceptions of RtI (b = .399, p < .001, model 1, Table 17), establishing a relationship between the explanatory and outcome variables and satisfying step one of the four-step mediation process. Professional development was significantly associated with teachers' personal efficacy beliefs related to RtI (b = .418, p < .001, model 2), establishing a relationship between the explanatory and mediator variables and satisfying step two of the four-step mediation process. Teachers' personal efficacy beliefs related to RtI were significantly associated with teachers' perceptions of RtI (b = .363, p < .001, model 3), establishing a relationship between the mediator and outcome variables and satisfying step three of the four-step mediation process. The fourth step of the mediation procedure suggests that the effect of professional development on teachers' perceptions of RtI is partially mediated through personal efficacy beliefs related to RtI because personal efficacy beliefs related to RtI and professional

development were significantly associated with teachers' perceptions of RtI in the multivariate analysis. Specifically, the effect of professional development on teachers' perceptions of RtI was attenuated by 24.9% when adjusting for personal efficacy beliefs related to RtI.

When general personal efficacy beliefs were used as the mediator variable, significant relationships were established in steps 1-3 of the four-step mediation procedure. Professional development was significantly associated with teachers' perceptions of RtI (b = .399, $p < .001$, model 1, Table 18), establishing a relationship between the explanatory and outcome variables and satisfying step one of the four-step mediation process. Professional development was significantly associated with teachers' general personal efficacy beliefs (b = .140, $p = .044$, model 2), establishing a relationship between the explanatory and mediator variables and satisfying step two of the four-step mediation process. Teachers' general personal efficacy beliefs were significantly associated with teachers' perceptions of RtI (b = .196, $p = .005$, model 3), establishing a relationship between the mediator and outcome variables and satisfying step three of the four-step mediation process. Although general personal efficacy beliefs (b = .143, $p = .026$, model 4) and professional development (b = .379, $p = < .001$, model 4) were significantly associated with teachers' perceptions of RtI in step four of the mediation process, the attenuation of the effect of professional development on teachers' perceptions of RtI was small (5.0%) when adjusting for general personal efficacy beliefs. Therefore, partial mediation was unlikely.

Table 15

Regression Analysis with Personal Efficacy Beliefs Related to RtI Mediating the Relationship Between Experience and Perceptions of RtI

	Perceptions of RtI											
	Model 1			Model 2**			Model 3			Model 4		
Unstandardized Coefficients	**Beta**	**SE**	**p-value**	**Beta**	**SE**	**p-value**	**Beta**	**SE**	**p-value**	**Beta**	**SE**	**p-value**
Intercept	38.562	.736	< .001	.130	.126	.304	37.961	.372	< .001	38.289	.690	< .001
Personal Efficacy*							2.093	.373	< .001	2.097	.382	< .001
Experience												
5 years or fewer	-.043	1.491	.977	-.073	.256	.777				.109	1.395	.938
6-10 years	-.801	1.050	.446	-.051	.180	.778				-.695	.982	.480
11-15 years	-1.150	1.237	.354	-.180	.212	.398				-.773	1.159	.506
16-20 years	-1.138	1.249	.364	-.503	.214	.020				-.083	1.184	.944
Over 20 years		reference			reference						reference	
	R^2	**Adj. R^2**	**F**	**R^2**	**Adj. R^2**	**F**	**R^2**	**Adj. R^2**	**F**	**R^2**	**Adj. R^2**	**F**
	.007	-.012	.38	.030	.011	1.56	.132	.128	31.45	.136	.115	6.38

	Perceptions of RtI											
	Model 1			Model 2**			Model 3			Model 4		
Standardized Coefficients	**Beta**	**SE**	**p-value**	**Beta**	**SE**	**p-value**	**Beta**	**SE**	**p-value**	**Beta**	**SE**	**p-value**
Personal Efficacy*							.363	.065	< .001	.364	.066	< .001
Experience												
5 years or fewer	-.002	.076	.977	-.021	.075	.777				.006	.071	.938
6-10 years	-.063	.083	.446	-.023	.082	.778				-.055	.077	.480
11-15 years	-.074	.079	.354	-.067	.079	.398				-.050	.074	.506
16-20 years	-.072	.079	.364	-.184	.078	.020				-.005	.075	.944
Over 20 years		reference			reference						reference	
	R^2	**Adj. R^2**	**F**	**R^2**	**Adj. R^2**	**F**	**R^2**	**Adj. R^2**	**F**	**R^2**	**Adj. R^2**	**F**
	.007	-.012	.38	.030	.011	1.56	.132	.128	31.45	.136	.115	6.38

* Self-Efficacy score was generated from principal components analysis (Factor 1).

** Outcome of Model 2 is personal efficacy beliefs related to RtI score.

Table 16

Regression Analysis with General Personal Efficacy Beliefs Mediating the Relationship Between Experience and Perceptions of RtI

	Perceptions of RtI											
	Model 1			Model 2**			Model 3			Model 4		
Unstandardized Coefficients	**Beta**	**SE**	**p-value**	**Beta**	**SE**	**p-value**	**Beta**	**SE**	**p-value**	**Beta**	**SE**	**p-value**
Intercept	38.562	.736	< .001	-.022	.125	.858	37.961	.392	< .001	38.589	.722	< .001
Personal Efficacy*							1.128	.393	.005	1.208	.404	.003
Experience												
5 years or fewer	-.043	1.491	.977	.041	.254	.872				-.092	1.463	.950
6-10 years	-.801	1.050	.446	-.171	.179	.339				-.594	1.032	.565
11-15 years	-1.150	1.237	.354	-.057	.210	.787				-1.081	1.214	.374
16-20 years	-1.138	1.249	.364	.487	.213	.023				-1.726	1.241	.166
Over 20 years		reference			reference						reference	
	R^2	**Adj. R^2**	**F**	**R^2**	**Adj. R^2**	**F**	**R^2**	**Adj. R^2**	**F**	**R^2**	**Adj. R^2**	**F**
	.007	-.012	.38	.046	.028	2.48	.038	.034	8.25	.049	.026	2.10

	Perceptions of RtI											
	Model 1			Model 2**			Model 3			Model 4		
Standardized Coefficients	**Beta**	**SE**	**p-value**	**Beta**	**SE**	**p-value**	**Beta**	**SE**	**p-value**	**Beta**	**SE**	**p-value**
Personal Efficacy*							.196	.068	.005	.210	.070	.003
Experience												
5 years or fewer	-.002	.076	.977	.012	.075	.872				-.005	.075	.950
6-10 years	-.063	.083	.446	-.078	.081	.339				-.047	.081	.565
11-15 years	-.074	.079	.354	-.021	.078	.787				-.069	.078	.374
16-20 years	-.072	.079	.364	.178	.078	.023				-.110	.079	.166
Over 20 years		reference			reference						reference	
	R^2	**Adj. R^2**	**F**	**R^2**	**Adj. R^2**	**F**	**R^2**	**Adj. R^2**	**F**	**R^2**	**Adj. R^2**	**F**
	.007	-.012	.38	.046	.028	2.48	.038	.034	8.25	.049	.026	2.10

* Self-Efficacy score was generated from principal components analysis (Factor 2).
** Outcome of Model 2 is general personal efficacy beliefs score.

Table 17

Regression Analysis with Personal Efficacy Beliefs Related to RtI Mediating the Relationship Between Professional Development and Perceptions of RtI

	Perceptions of RtI											
	Model 1			Model 2**			Model 3			Model 4		
Unstandardized Coefficients	**Beta**	**SE**	**p-value**	**Beta**	**SE**	**p-value**	**Beta**	**SE**	**p-value**	**Beta**	**SE**	**p-value**
Intercept	30.231	1.289	< .001	-1.405	.222	< .001	37.961	.372	< .001	32.159	1.372	< .001
Personal Efficacy*							2.093	.373	< .001	1.372	.394	.001
Prof. Development	.352	.056	< .001	.064	.010	< .001				.264	.060	< .001
	R^2	**Adj. R^2**	**F**	**R^2**	**Adj. R^2**	**F**	**R^2**	**Adj. R^2**	**F**	**R^2**	**Adj. R^2**	**F**
	.159	.155	39.15	.174	.170	43.71	.132	.128	31.45	.206	.198	26.70

	Perceptions of RtI											
	Model 1			Model 2**			Model 3			Model 4		
Standardized Coefficients	**Beta**	**SE**	**p-value**	**Beta**	**SE**	**p-value**	**Beta**	**SE**	**p-value**	**Beta**	**SE**	**p-value**
Personal Efficacy*							.363	.065	< .001	.238	.068	.001
Prof. Development	.399	.064	< .001	.418	.063	< .001				.299	.068	< .001
	R^2	**Adj. R^2**	**F**	**R^2**	**Adj. R^2**	**F**	**R^2**	**Adj. R^2**	**F**	**R^2**	**Adj. R^2**	**F**
	.159	.155	39.15	.174	.170	43.71	.132	.128	31.45	.206	.198	26.70

* Self-Efficacy score was generated from principal components analysis (Factor 1).
** Outcome of Model 2 is personal efficacy beliefs related to RtI score.

Table 18

Regression Analysis with General Personal Efficacy Beliefs Mediating the Relationship Between Professional Development and Perceptions of RtI

	Perceptions of RtI											
	Model 1			Model 2**			Model 3			Model 4		
Unstandardized Coefficients	**Beta**	**SE**	**p-value**	**Beta**	**SE**	**p-value**	**Beta**	**SE**	**p-value**	**Beta**	**SE**	**p-value**
Intercept	30.231	1.289	< .001	-.469	.242	.053	37.961	.392	< .001	30.618	1.288	< .001
Personal Efficacy*							1.128	.393	.005	.823	.367	.026
Prof. Development	.352	.056	< .001	.021	.011	.044				.334	.056	< .001
	R^2	**Adj. R^2**	**F**	**R^2**	**Adj. R^2**	**F**	**R^2**	**Adj. R^2**	**F**	**R^2**	**Adj. R^2**	**F**
	.159	.155	39.15	.020	.015	4.11	.038	.034	8.25	.179	.171	22.47

	Perceptions of RtI											
	Model 1			Model 2**			Model 3			Model 4		
Standardized Coefficients	**Beta**	**SE**	**p-value**	**Beta**	**SE**	**p-value**	**Beta**	**SE**	**p-value**	**Beta**	**SE**	**p-value**
Personal Efficacy*							.196	.068	.005	.143	.064	.026
Prof. Development	.399	.064	< .001	.140	.069	.044				.379	.064	< .001
	R^2	**Adj. R^2**	**F**	**R^2**	**Adj. R^2**	**F**	**R^2**	**Adj. R^2**	**F**	**R^2**	**Adj. R^2**	**F**
	.159	.155	39.15	.020	.015	4.11	.038	.034	8.25	.179	.171	22.47

* Self-Efficacy score was generated from principal components analysis (Factor 2).
** Outcome of Model 2 is general personal efficacy beliefs score.

Research Question 4: *To what extent do (a) characteristics of PD and (b) components of PD account for teacher perceptions of reform?*

The unadjusted model revealed that all three characteristics and all four components of professional development were significantly associated with teachers' perceptions of RtI ($p <$ .05, Table 19). However, the adjusted model found that only the third characteristic of professional development, "has been applicable for me to be able to implement RtI in the specific context of my classroom" (item 3), was significantly associated with teachers' perceptions of RtI ($p < .001$). The adjusted model also found that the first component of professional development, "has included exploration of theory, research, or rationale behind RtI through discussions, readings, or lectures" (item 5), approached significance ($p = .080$). Multivariate results revealed that a one SD increase in applicable professional development related to RtI was significantly associated with a .482 SD increase in teachers' perceptions of RtI (unstandardized ß = 2.845, $p < .001$). A one SD increase in professional development that includes exploration of theory, research, or rationale behind RtI was associated with a .146 SD increase in teachers' perceptions of RtI (unstandardized ß = .791, $p = .080$). The adjusted model demonstrated satisfactory model fit ($F = 8.69$, $p < .001$), with the covariate set accounting for 23.2% of the variance in teachers' perceptions of RtI.

Table 19

Regression Analysis with Characteristics and Components of Effective Professional Development Predicting Perceptions of RtI

	Unadjusted					*Adjusted*				
	Unstandardized		**Standardized**			**Unstandardized**		**Standardized**		
	Beta	**SE**	**Beta**	**SE**	**p-value**	**Beta**	**SE**	**Beta**	**SE**	**p-value**
Intercept						28.857	1.397			< .001
Characteristics of PD										
Continuous	1.720	.398	.287	.067	< .001	-.902	.630	-.151	.105	.154
Directly linked	2.381	.405	.378	.064	< .001	.237	.718	.038	.114	.742
Applicable	2.695	.365	.456	.062	< .001	2.845	.660	.482	.112	< .001
Components of PD										
Exploration of theory, research, or rationale	1.670	.357	.309	.066	< .001	.791	.450	.146	.083	.080
Modeling or demonstration	1.406	.372	.254	.067	.000	-.028	.565	-.005	.102	.960
Opportunities to "try out" or practice	1.271	.395	.218	.068	.002	.493	.531	.085	.091	.354
On-site classroom coaching or opportunities to collaborate	1.085	.322	.228	.068	.001	-.436	.440	-.092	.093	.330
						R^2	**Adj. R^2**	**F**	**p-value**	
						.232	.206	8.69	< .001	

CHAPTER 5

Discussion

A survey was administered to elementary-level general education and special education teachers (Grades 4K-5) across 32 schools at various stages of RtI implementation to gather information on factors that impact teachers' perceptions of reform. Results of the study confirmed that congruent teaching philosophy and practices, general personal efficacy beliefs, personal efficacy beliefs related to RtI, and professional development significantly influence teachers' perceptions of reform. Experience, on the other hand, was not found to be a significant predictor of teachers' perceptions of reform. The purpose of this chapter is to discuss the general research findings, examine limitations of the current study, identify areas for future research, and present implications for systems change.

Effects of Congruence of Beliefs, Self-Efficacy, Experience, and Professional Development on Teachers' Perceptions of RtI

Congruence of Beliefs

The results of this study support the prediction that the greater extent to which teachers' personal beliefs about teaching and learning are congruent with the philosophies and practices associated with reform, the more positively teachers feel about the reform initiative. After controlling for all other explanatory variables, congruence scores were significantly associated with teachers' ratings of acceptability of RtI, indicating that higher congruence of beliefs is associated with more positive perceptions of RtI. This finding is consistent with previous research findings that teachers whose beliefs are congruent with reform typically support the reform initiative, whereas those whose beliefs are incongruent tend to resist it (Datnow & Castellano, 2000; Schmidt & Datnow, 2005). This finding suggests that attempting to align

teachers' beliefs more closely with the underlying principles and rationale for reform initiatives (e.g., through professional development or motivational strategies) may lead to higher implementation of reform practices.

Self-Efficacy

In this study, self-efficacy was conceptualized as both beliefs about teaching, in general, and beliefs about RtI implementation (r = .408) and each indicator was analyzed as a separate and independent variable. The results partially support the prediction that higher self-efficacy is associated with more positive perceptions of RtI. Both self-efficacy beliefs about teaching, in general, and about RtI implementation, in particular, were significantly associated with teachers' perceptions of RtI, when controlling for all other explanatory variables in the model. This finding supports research by Allinder (2004), Brighton (2003), and Guskey (1988), which found that teachers who express a high level of self-efficacy were more receptive to implementing new instructional practices compared to their less efficacious colleagues. The results of the current study suggest that overall high teacher self-efficacy (not necessarily specific to the reform initiative) contributes to teachers' positive perceptions of reform and amenability to change.

Amount of Experience

Results did not support the predicted relationships between teachers' years of experience and their perceptions of RtI. Although the positive standardized regression coefficients reveal that teachers with less than 20 years of experience feel more positively about RtI compared to teachers with over 20 years of experience, amount of experience in education was not significantly associated with teachers' perceptions of reform in the current study.

This finding was likely influenced by multiple factors. First, the sample consisted of more teachers in the mid-career (6-20 years; 60.8%) and later career stages (over 20 years;

29.7%) compared to teachers in the early-career stage (less than 5 years; 9.6%). Therefore, the levels of experience were not equally distributed. As a result, it is possible, and likely, that the sample size from the early-career stage was not large enough to detect an effect in the current study. Second, item 3 on the *Background Information Scale*, which measured teachers' experience in education, may have been interpreted differently across participants. The intent of this item was to determine the number of years participants had been working as in-service teachers. Specifically, the item asked, *How many years have you worked in education?* rather than, *How many years have you worked as an in-service teacher?* It is possible that participants may have interpreted the item to include both their pre-service and in-service experiences, thus skewing the results in the direction of more experience. Third, the present study's predictions were based on the three career stage categories from the Hargreaves (2005) study (i.e., 5 years or fewer, 6-20 years, over 20 years). However, the current study divided the mid-career stage category (6-20 years) into three distinct levels (6-10 years, 11-15 years, 16-20 years, respectively), creating a five-level experience variable. Consequently, the results from the current study may be different than the Hargreaves (2005) study due to the increased number of career stage categories.

Furthermore, it is possible that the nature or quality of teachers' experience in education has a greater impact on teachers' perceptions of reform than simply the number of years of teaching experience. For example, teachers with fewer years of experience yet more opportunities to practice skills, receive supervision, collaborate with colleagues, and participate in high-quality professional development, may have a richer teaching experience compared to their colleagues with more years of experience. Future research should focus on examining the relationship between quality of the teaching experience and teachers' perceptions of reform.

Professional Development

The results of the present study support the prediction that professional development is significantly associated with teachers' perceptions of RtI. Specifically, high-quality PD related to RtI was associated with higher perceptions of RtI. This finding suggests that educators who acquire skills to implement a reform initiative through effective PD may be more receptive to adopting and implementing the reform approach (Kratochwill et al., 2007). These results are encouraging because the amount and quality of PD (unlike teacher beliefs) is a factor under the control of educational leaders working to promote school reform initiatives, such as RtI. District administrators will benefit from investing significant time and resources in the design and delivery of effective PD related to reform initiatives.

Effects of Experience and Professional Development on Self-Efficacy Beliefs

Amount of Experience

Results from the current study did not support the hypothesized relationship between years of education experience and self-efficacy beliefs. There were no significant differences in efficacy beliefs related to RtI implementation between teachers with less than versus more than 10 years of experience. Similar findings were obtained when general teaching efficacy beliefs were the outcome; there were no differences in teacher self-efficacy between teachers with less than versus more than 10 years of experience.

These results could be explained by a couple of factors. First, as noted previously, teachers in the survey sample were not equally distributed across different levels of teaching experience, and the survey item measuring experience may have been misinterpreted by respondents. Second, self-efficacy is a personal trait that may evoke an emotional response from teachers. It is possible that participants refrained from reporting low personal efficacy beliefs out

of fear of being perceived as a less competent teacher. As a result, participants' average scores may have been uniformly inflated (across all levels of experience) if there was a social desirability effect and that could have accounted for no difference in teachers' personal efficacy beliefs (*Personal Efficacy* subscale *M* = 57.60; *Perceptions of RtI Skills Survey-Revised M* = 32.99).

Professional Development

This study supports the prediction that the quality of professional development (as measured by the number of research-supported PD elements) is related to teachers' self-efficacy beliefs. Significant positive relationships were found between professional development and overall teaching self-efficacy beliefs as well as self-efficacy specifically related to RtI. This finding has promising implications for school reform because the results indicate that personal efficacy, a within-person factor, may be influenced by characteristics and evidence-based components of PD, an external factor. The current study appears to be consistent with previous research, which has found that teachers who express a high level of self-efficacy are more receptive to implementing new instructional practices than their less efficacious colleagues (Allinder, 1994; Brighton, 2003; Guskey, 1988). High-quality PD may lead to increased skills in implementing new educational practices, which, in turn, may result in higher overall implementation.

Self-Efficacy as a Mediator of the Relationship between Experience and Professional Development on Perceptions of RtI

Amount of Experience

It was predicted that teacher self-efficacy would mediate the relationship between years of teaching experience and teacher perceptions of RtI. However, results indicated that mediation

was unlikely when both personal efficacy beliefs related to RtI and general personal efficacy beliefs were used as explanatory variables. This finding was not surprising because no significant relationships were established between experience and perceptions of RtI in earlier analyses. As previously discussed, this finding may be attributed to the fact that experience was operationalized by number of years of teaching experience, which may not have been as significant of a predictor as the nature or quality of the teaching experience.

Professional Development

It was also predicted that teacher self-efficacy beliefs would mediate the positive relation between PD and teacher perceptions of RtI. Specifically, effective PD was predicted to enhance teacher self-efficacy beliefs, which, in turn, would contribute to more positive teacher perceptions of RtI. The study found that the effect of PD on teachers' perceptions of RtI was partially mediated through personal efficacy beliefs related to RtI, but not general personal efficacy beliefs. This finding was not surprising because the PD teachers were asked to rate was specific to the RtI reform initiative. Therefore, mediation was only supported when the self-efficacy beliefs being measured were related to the PD teachers received (i.e., specific to the particular reform initiative).

Effects of Effective Characteristics and Components of Professional Development on Perceptions of RtI

Professional Development Characteristics

The prediction that all three characteristics of PD specific to the reform would demonstrate a significant association with teacher perceptions of RtI was not supported. Only one PD characteristic, "has been applicable for me to be able to implement RtI in the specific context of my classroom" (item 3), was significantly associated with perceptions of reform,

when controlling for all other PD characteristics and components. This finding supports work by Bredeson (2003) and Fullan (2011) who argue that the most powerful professional learning opportunities for educators are directly linked to their specific situation. Therefore, if educational leaders aim to foster positive views towards reform, these results suggest they should design professional learning opportunities that consider and incorporate teachers' unique classroom contexts.

Professional Development Components

Additionally, the prediction that all four evidence-based components of PD specific to the reform would demonstrate a significant association with teacher perceptions of RtI was not supported. The first PD component from the Joyce and Showers' (2002) framework, "has included exploration of theory, research, or rationale behind RtI through discussions, readings, or lectures" (item 5), approached significance but none of the other three components was a significant predictor of teachers' perceptions of reform. This finding may be due to the fact that the Joyce and Showers model of PD was developed primarily around training teachers to implement an individual classroom strategy rather than systems-level reform. The current study was unique in that it applied the four-component model to system-level reform (i.e., RtI). Results suggest that the application of each PD component (i.e., coaching) to RtI may be different than the application to a single classroom strategy.

The fourth research question sheds light on the nature of PD currently being offered in schools on RtI. When teachers were asked to rate the extent to which their PD on RtI has been adequate for them to implement RtI in their classrooms (item 4), 26% of participants selected "not at all" or "very little." Only 9% of participants endorsed the highest rating possible (i.e., "a great deal"). This finding indicates that some schools are not currently providing sufficient

professional learning opportunities for teachers to develop the confidence, knowledge, and skills to implement RtI in their classrooms. RtI is a multi-faceted and complex service delivery model (Kratochwill et al., 2007). Therefore, schools may benefit from examining the effectiveness of their current PD offerings and investing in more high-quality support to assist their teachers in implementing RtI with fidelity.

A surprising finding was that 43% of the sample (n = 89) endorsed receiving PD that had "included exploration of the theory, research, or rationale behind RtI through discussions, readings, or lectures" (item 5) "not at all" or "very little" (Appendix C). Foundational knowledge of reform initiatives is necessary for educators to understand the concepts behind a new skill or strategy and the principles that govern its use (Joyce & Showers, 2002). Without a solid understanding of the theory behind a reform initiative or a rationale for why change is necessary, it may be more difficult for teachers to buy-into the new practices they are being asked to implement. Bredeson (2002) stated that effective school-wide reform gives coherence and meaning to school improvement, individual practice, and learning throughout the organization. Therefore, it is essential that educational leaders devote particular efforts toward ensuring that teachers understand the theory, rationale, and assumptions behind reform initiatives, especially during the first training session (Kratochwill et al., 2007).

Despite evidence that comprehensive, multi-component PD models produce the most substantial gains in teacher knowledge, skill, and application, results from this study reveal that teachers are receiving PD lacking in evidence-based components (Appendix C). For example, 11% of participants did not receive any PD that included exploration of the theory, research, or rationale behind the reform (item 5); 17% of participants did not receive any PD that included modeling or demonstration of RtI (item 6); 28% of participants did not receive any PD that

included opportunities to "try out" or practice RtI skills (item 7); and 35% of participants did not receive any PD that included on-site classroom coaching or opportunities to collaborate with other teachers in their classroom about RtI (item 8). These findings indicate that the PD is predominantly designed for teachers to develop new knowledge and skills within the training context rather than the classroom setting. Therefore, it would be beneficial for future reform-related PD to offer more on-site classroom coaching or collaboration among colleagues; without this classroom-level support, it may be difficult for teachers to transfer what they learn in PD offerings to their specific classroom setting.

Given that the current study examined only a small sampling of high-quality PD characteristics and components that have been found to be effective, it would be beneficial for future research to expand upon the number of PD characteristics and components studied to determine the relationship with teachers' perceptions of reform and self-efficacy beliefs for implementing new practices. It would also be beneficial for future research to investigate which specific components of effective PD have the greatest impact on teachers' self-efficacy beliefs related to reform during the different stages of reform implementation (i.e., consensus building, infrastructure building, implementation). This knowledge will guide the design of professional learning opportunities that best support teachers in implementing reform with integrity.

Optional open-ended questions on the *TP-RtI Survey* allowed teachers to share additional comments regarding each of the four factors examined in the current study as well as their perceptions of RtI. Although the teachers' comments did not reveal any common themes related to reform, the tone of the comments suggests that teachers are experiencing a range of feelings towards RtI, with some teachers feeling optimistic about RtI, some feeling frustrated, and others unsure of how they feel about RtI. Many comments provided district-specific critiques of the PD

teachers had received on RtI and the implementation barriers they were encountering at the time of the study. As such, the hope is that administrators from each participating district will review the open-ended comments and use them to inform and enhance their future PD offerings and RtI implementation strategies.

Limitations

There were several limitations in the current study that are important to address. First, the second component of self-efficacy, outcome expectancy, was not measured because no instrument was available at the time of the study to examine teachers' beliefs about whether student outcomes are attributable to implementing RtI practices. Only teachers' personal efficacy beliefs, or efficacy expectations, could be measured. Therefore, the results of this study only support the relationship between personal efficacy beliefs related to RtI and teachers' perceptions of the reform. Future research should be conducted on the development of an outcome expectancy scale related to reform to allow for the relationship between both components of self-efficacy and teachers' perceptions of reform to be examined.

Second, the study did not directly assess what teachers knew about RtI or how they were implementing the reform in their classrooms. Instead, teachers were asked to self-report their level of familiarity with RtI in the *TP-RtI Survey*. Relying on self-report, instead of direct assessment, may limit the validity of conclusions about teachers' knowledge and implementation of RtI. Therefore, future research is needed to directly examine the relationship between teachers' knowledge of RtI, their actual level of RtI implementation, and their perceptions of the reform initiative.

Third, the study did not examine the impact of specific characteristics and components of high-quality PD on teachers' personal efficacy beliefs. Rather, it used scores from the *PD*

Composite Scale for the explanatory variable. Future research is therefore needed to investigate which specific high-quality PD characteristics and components are most highly related to teachers' personal efficacy beliefs in order to help educational leaders provide the most effective PD to their staff during the change process.

Fourth, the distribution of participant ratings for the PD components on the *PD Composite Scale* (items 5-8) was skewed to the left. The first PD component, "has included exploration of theory, research, or rationale behind RtI through discussions, readings, or lectures," had a more normal distribution compared to the other three components and was the only component that approached significance; thus, it is possible that the other PD components would have demonstrated significant associations with teachers' perceptions of reform if their ratings had been more normally distributed (Appendix C).

Finally, future research should be conducted on secondary general education and special education teachers' (a) congruence of beliefs, (b) self-efficacy beliefs related to reform, (c) teaching experience, and (d) PD related to reform because the results of the current study are limited to elementary teachers (Grades 4K-5). While the core features of RtI are the same across any pre-K-12 educational setting, implementation at the elementary and secondary levels may be different due to their unique organizational and structural features, curriculum organization, and emphasis on academics and behavior management (Sugai, Flannery, & Bohanon-Edmonson, 2004; Windram, Bollman, & Johnson, 2012). Therefore, educational leaders will likely benefit from understanding how the four factors examined in the current study specifically influence secondary teachers' perceptions of reform.

Implications for Practice

The current study indicates that congruent teaching philosophy and practices have the greatest impact on teachers' perceptions of reform compared to self-efficacy beliefs, teaching experience, and PD related to reform. Specifically, the more aligned a teacher's beliefs and practices are with a reform initiative, the more positively the teacher feels about the reform. Given this finding, it may be beneficial to direct particular efforts toward understanding the extent to which staff's teaching philosophies and practices align with a targeted reform initiative before, during, and after implementation to better understand why teachers may be hesitant or resistant to change and to better inform professional development offerings. Fullan (2011) explains that effective change leaders do not attempt to convince others with evidence or overpower them with authority when faced with opposition. Rather, they empathize with their colleagues and try to put themselves in other people's shoes, particularly those who hold values and experiences different from their own, and create environments that help their colleagues learn and grow. Taking time to listen and learn about staff concerns will likely help educational leaders design more effective training that is customized to their teachers' unique needs.

The present study also indicates that teachers may not necessarily require high personal efficacy beliefs related to a reform initiative in order to feel positively about the reform. Teachers with high teaching efficacy beliefs perceived RtI more positively than their less efficacious colleagues. This finding could suggest that teachers who feel more efficacious in their teaching abilities may be more open and receptive to new ideas on instructional practices compared to less efficacious teachers (Guskey, 1988). Results of the current study also demonstrate that effective PD enhances teachers' personal efficacy beliefs related to reform, which, in turn, contributes to more positive teacher perceptions of reform initiatives. This is an encouraging finding that underscores the importance of investing in ample time and resources for PD to effectively

support general teaching practices as well as acquisition of new knowledge, strategies, and skills related to reform. Educational leaders would particularly benefit from conducting a formal needs assessment to target specific topics for PD that are tailored to the individual needs of their staff throughout the change process.

Lastly, the current study illustrates the nature of reform-related PD currently being offered in schools. Results indicate that professional learning opportunities tend to support teachers in acquiring new knowledge and skills within the training context but do not provide adequate support for teachers to transfer or apply the new concepts and skills they learn to their classroom. Prior research suggests that classroom-level support is necessary for teachers to transfer the new skills they learn within the training context to the classroom setting (Joyce & Showers, 2002). It is unfortunate that over half of the teachers in the present study (n = 130; 62%) endorsed receiving very little or no classroom-level support in their professional learning offerings. In the future, PD opportunities should be designed to include as many elements of high-quality PD as possible, including on-site classroom coaching or opportunities for teachers to collaborate with colleagues when implementing the reform. The success of reform initiatives, such as RtI, largely rely on the support that teachers receive from educational leaders to implement new practices with fidelity. With enhanced professional learning opportunities it is hoped that teachers will be better equipped to incorporate reform practices into their daily work, provide effective instruction, and improve the academic and behavioral outcomes of all students.

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Appendix A

Teacher Perceptions of Response-To-Intervention Survey

Consent Form

I have read the description of the research project to evaluate teachers' perceptions of RtI. I understand that my participation will involve completing an electronic survey and that all survey data will be kept in a secure location. I further understand that I have the option of participating in a raffle to win a $50 gift card. If I decide to participate in the raffle, my contact information will not be linked to my survey responses. Finally, I understand that participation is voluntary and involves no foreseeable risks. I may withdraw my participation at any time.

I certify that: [check all that apply]

_____ I am an elementary general education and/or special education teacher who works with students in Grades 4K-5.

_____ I have received some type of professional development related to RtI.

_____ I work in a school that is currently in the process of implementing RtI.

Please check the appropriate statement below:

_____ I agree to complete the Teacher Perceptions of Response-To-Intervention Survey.

_____ I do not agree to participate.

Part 1: **BACKGROUND INFORMATION**

1. In what school district do you currently work? _____

Directions: *For items 2-8 below, please shade in the circle next to the response option that best represents your answer.*

2. What is your current job description? [check all that apply]
   - O General education teacher
   - O Special education teacher

3. How many years have you worked in education?
   - O 5 years or fewer
   - O 6-10 years
   - O 11-15 years
   - O 16-20 years
   - O Over 20 years

4. What is the highest degree you have earned?
   - O High school diploma or equivalent
   - O BA/BS
   - O MA/MS
   - O EdS
   - O PhD/EdD
   - O Other (please specify): _____

5. Which statement best describes the current level of RtI implementation in your school? [check all that apply]
   - O Teachers understand the theory and research underlying RtI and how implementation of RtI will improve student outcomes.
   - O Progress has been made toward establishing procedures to implement RtI, such as forming a leadership team and developing a data collection plan.
   - O Teachers have begun to implement some, but not all, aspects of RtI.
   - O RtI is being fully implemented in all classrooms.

6. To what extent does your school's leadership team provide support for RtI implementation?
   - O Not At All
   - O Very Little
   - O Somewhat
   - O A Lot
   - O A Great Deal

7. How much training related to RtI have you received (e.g., pre-service training, in-service training, graduate coursework)?
   - O None
   - O Very Little
   - O Some
   - O A Lot
   - O A Great Deal

8. How knowledgeable are you about RtI?
   - O I have no knowledge.
   - O I have very little knowledge.
   - O I have some knowledge.
   - O I am very knowledgeable.

Part 2: **PERCEPTIONS OF RESPONSE-TO-INTERVENTION**

Directions: *Please indicate your level of agreement or disagreement with each of the following statements:*

	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
1. RtI is an acceptable procedure for identifying and supporting students with academic and behavior needs.	1	2	3	4	5	6
2. RtI is effective for improving educational outcomes for all students.	1	2	3	4	5	6
3. Students' academic and behavior needs justify the use of RtI.	1	2	3	4	5	6
4. I am willing to use RtI procedures in my classroom.	1	2	3	4	5	6
5. There are too many obstacles for me to implement RtI procedures.	1	2	3	4	5	6
6. RtI procedures are worthwhile.	1	2	3	4	5	6
7. RtI is a good way to address students' academic and behavior needs.	1	2	3	4	5	6
8. Overall, RtI helps students.	1	2	3	4	5	6

Optional Question: Would you like to share anything else about your impression of RtI?

_____
_____
_____
_____
_____

Part 3: **BELIEFS ABOUT TEACHING AND LEARNING**

Directions: *Please indicate your level of agreement or disagreement with each of the following statements:*

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. Core instruction should enable 80% of students to achieve benchmarks.	1	2	3	4	5
2. The purpose of supplemental instruction is to ensure that students meet grade-level benchmarks.	1	2	3	4	5
3. Students with high-incidence disabilities (such as specific learning disability) who receive special education are capable of achieving grade-level benchmarks.	1	2	3	4	5
4. General education teachers should differentiate their instruction to address the needs of all students.	1	2	3	4	5
5. The use of supplemental interventions (e.g., tier 2, tier 3) in the general education classroom will result in success for more students.	1	2	3	4	5
6. Prevention and early intervention will result in fewer special education referrals.	1	2	3	4	5
7. The "severity" of a student's instructional needs is determined by how quickly the student responds to intervention.	1	2	3	4	5
8. The "severity" of a student's behavioral needs is determined by how quickly the student responds to intervention.	1	2	3	4	5
9. Using student-based data to determine the effectiveness of an intervention is more accurate than using only "teacher judgment."	1	2	3	4	5
10. Evaluating a student's response to interventions is more informative than using test scores to determine what the student is capable of achieving.	1	2	3	4	5
11. Graphing student data makes it easy to make decisions about the student's progress and need for intervention.	1	2	3	4	5
12. The goal of assessment is to develop and measure the effectiveness of instruction/intervention.	1	2	3	4	5
13. My personal teaching philosophy and practices are well-aligned with RtI.	1	2	3	4	5

Optional Question: Would you like to share anything else about your beliefs about teaching and learning?

_____

_____

_____

_____

_____

Part 4: **SELF-EFFICACY BELIEFS**

Directions: *Please indicate the degree to which you agree or disagree with each statement below using the following rating scale:*

	Strongly Disagree	Moderately Disagree	Disagree Slightly More Than Agree	Agree Slightly More Than Disagree	Moderately Agree	Strongly Agree
1. I can effectively manage my students' behavior.	1	2	3	4	5	6
2. When a student has difficulty with an assignment, I am usually able to adjust it to his/her level.	1	2	3	4	5	6
3. I can get through to the most difficult students.	1	2	3	4	5	6
4. When a student is verbally abusive to another student, I know some techniques to prevent the conflict from escalating.	1	2	3	4	5	6
5. I can usually help students who exhibit hyperactive behavior.	1	2	3	4	5	6
6. If a student does not remember information from a previous lesson, I know how to increase his/her retention in the next lesson.	1	2	3	4	5	6
7. If a student becomes disruptive and noisy, I know some techniques to redirect him/her quickly.	1	2	3	4	5	6
8. If my students are difficult to control on a particular day, there is little I can do to gain control of the class.	1	2	3	4	5	6
9. If one of my students cannot do a class assignment, I am able to accurately assess whether the assignment is at the correct level of difficulty.	1	2	3	4	5	6
10. When a student is angry, there is little I can do.	1	2	3	4	5	6
11. If a student is withdrawn and isolated, I know ways of helping the student open up.	1	2	3	4	5	6

Optional Question: Would you like to share anything else about your self-efficacy beliefs?

_____
_____
_____
_____
_____

Directions: *Think about each skill or activity listed below related to assessment, instruction, or intervention. Then, evaluate YOUR level of skill for performing each activity. Please use the following response scale:*

1 = I do not have this skill at all.
2 = I have minimal skills in this area; need substantial support to use it.
3 = I have this skill, but still need some support to use it.
4 = I can use this skill with little support.
5 = I am highly skilled in this area and could teach others this skill.

The skill to:	No Skill	Minimal Skill	Have Skill	Can Use Skill	Highly Skilled
1. Administer and/or "make sense" of data from *universal screening* measures that assess students' academic and/or behavioral functioning.	1	2	3	4	5
2. Use universal screening data to *make decisions about necessary adjustments to the core* academic curriculum and/or behavior management plan for all students in my classroom.	1	2	3	4	5
3. Use universal screening data to *make decisions about necessary adjustments in the core curriculum for individual students* who are below grade-level benchmarks.	1	2	3	4	5
4. Follow *decision rules* to decide which students are at risk for poor outcomes (i.e., students who are not benefitting from the core instruction).	1	2	3	4	5
5. Identify and/or implement an appropriate *scientifically-proven, supplemental academic intervention* for students who are at-risk for poor academic outcomes (i.e., students who are not benefitting from the core academic curriculum).	1	2	3	4	5
6. Identify and/or implement an appropriate *scientifically-proven, supplemental behavioral intervention* for students who are at-risk for poor behavioral outcomes (i.e., students who are not benefitting from the class-wide behavior management plan).	1	2	3	4	5
7. Ensure that supplemental academic and/or behavioral interventions are delivered as they are intended – with *accuracy, consistency, and fidelity*.	1	2	3	4	5
8. Select and/or administer assessment tools to *monitor weekly or bi-weekly progress of at-risk students* who receive supplemental academic and/or behavioral interventions.	1	2	3	4	5
9. *Set goals, calculate slope, and determine trend lines* for individual student's progress-monitoring data.	1	2	3	4	5
10. Use progress-monitoring data to *make decisions about students who are receiving supplemental interventions* (e.g., make modifications to an intervention; refer to special education; etc.).	1	2	3	4	5

Optional Question: Would you like to share anything else about the skills you possess to implement RtI practices?

_____
_____
_____
_____
_____

Part 5: **PROFESSIONAL DEVELOPMENT**

Directions: *Please think about the professional development activities related to RtI in which you have participated. Rate the extent to which your professional development overall included each of the following characteristics and components.*

The professional development I have received related to RtI:	Not At All	Very Little	Somewhat	A Lot	A Great Deal	Don't Know; Not Sure
1. Has been **continuous** and provides ongoing learning opportunities and support to help me implement RtI.	1	2	3	4	5	6
2. Has been **directly linked** to helping me meet my students' needs and achieve my instructional goals through RtI.	1	2	3	4	5	6
3. Has been **applicable** to implementing RtI in the specific context of my classroom (i.e., routine, daily schedule, etc.).	1	2	3	4	5	6
4. Has been **adequate** for me to be able to implement RtI in my classroom.	1	2	3	4	5	6
5. Has included **exploration of the theory, research, or rationale** behind RtI through discussions, readings, or lectures.	1	2	3	4	5	6
6. Has included **modeling or demonstration** of RtI practices and skills through film, videotape, or live demonstrations.	1	2	3	4	5	6
7. Has included **opportunities to "try out" or practice** RtI skills in role-play or simulated situations and receive feedback.	1	2	3	4	5	6
8. Has included **on-site classroom coaching or opportunities to collaborate** with other teachers during actual implementation of RtI in my classroom.	1	2	3	4	5	6

Optional Question: Would you like to share anything else about the professional development you have received related to RtI?

_____
_____
_____
_____
_____

Would you like to participate in an optional raffle for a $50 gift card?

O Yes [You will be redirected to a separate survey to enter your contact information]
O No

Thank You!

Survey #2: Raffle

Optional Raffle

Please enter your name and email address to participate in the raffle.

Name: _____ Email: _____

Appendix B

Initial IRB Approval Letter

Education Research IRB
3/8/2013

Submission ID number: 2013-0259

Title: Factors that Impact Teachers' Perceptions of the Response to Intervention (RtI) School-Wide Reform Initiative

Principal Investigator: MARIBETH GETTINGER

Point-of-contact:

IRB Staff Reviewer: JEFFREY NYTES

A designated ED IRB member conducted an expedited review of the above-referenced initial application. The study was approved by the IRB member for the period of 12 months with the expiration date of 3/7/2014. The study qualified for expedited review pursuant to 45 CFR 46.110 and, if applicable, 21 CFR 56.110 and 38 CFR 16.110 in that the study presents no more than minimal risk and involves:

Category 7: Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, or quality assurance methodologies.

Initial approval is for [redacted] Schools only. A change of protocol must be submitted to the IRB prior to engagement at additional sites.

To access the materials approved by the IRB, including any stamped consent forms, recruitment materials and the approved protocol, if applicable, please log in to your ARROW account and view the documents tab in the submission's workspace.

If you requested a HIPAA waiver of authorization, altered authorization and/or partial authorization, please log in to your ARROW account and view the history tab in the submission's workspace for approval details.

Prior to starting research activities, please review the Investigator Responsibilities guidance (http://go.wisc.edu/m0lovn), which includes a description of IRB requirements for submitting continuing review progress reports, changes of protocol and reportable events.

Please contact the appropriate IRB office with general questions: Health Sciences IRBs at 608-263-2362 or Education Research and Social & Behavioral Science IRBs at 608-263-2320. For questions related to this submission, contact the assigned staff reviewer.

Appendix C

Frequency of PD Characteristics and Components Endorsed by Participants

The professional development I have received related to RtI:	Not At All	Very Little	Somewhat	A Lot	A Great Deal	Don't Know; Not Sure
1. Has been **continuous** and provides ongoing learning opportunities and support to help me implement RtI.	13	44	90	49	12	1
2. Has been **directly linked** to helping me meet my students' needs and achieve my instructional goals through RtI.	6	43	90	55	14	1
3. Has been **applicable** to implementing RtI in the specific context of my classroom (i.e., routine, daily schedule, etc.).	8	45	87	48	19	2
4. Has been **adequate** for me to be able to implement RtI in my classroom.	14	39	93	43	18	2
5. Has included **exploration of the theory, research, or rationale** behind RtI through discussions, readings, or lectures.	22	67	70	36	14	0
6. Has included **modeling or demonstration** of RtI practices and skills through film, videotape, or live demonstrations.	36	75	67	18	11	2
7. Has included **opportunities to "try out" or practice** RtI skills in role-play or simulated situations and receive feedback.	59	83	44	15	5	1
8. Has included **on-site classroom coaching or opportunities to collaborate** with other teachers during actual implementation of RtI in my classroom.	73	57	45	21	13	0