

## Response to Intervention in Illinois: An Exploration of School Professionals' Attitudes and Beliefs

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*The present study examines school professionals' self-reported perceptions of readiness in relation to the implementation of Response to Intervention (RTI) following a mandated deadline across the state of Illinois, as well their beliefs about the framework. A survey was developed to measure variables in the model related to school professionals' training and levels of confidence about various aspects of RTI. Results indicate that the model applied differently to school psychologists and other school professionals, explaining 64% and 66%, respectively, of the variance in perceiving RTI as a beneficial change. While there were differences in the number and type of variables found statistically significant for each group, the strongest predictive variable across school professionals was perceived leadership competence. Implications of the findings on wide scale implementation of RTI are discussed, with points for consideration in advance of new policy initiatives.*

The number of students identified with learning disabilities (LD) has risen dramatically since the passage of PL 94-142 (1975), in which the federal government first recognized LD as a category of disability eligible for special education funding (Hallahan & Mercer, 2001). LD is now the most commonly identified disability in American schools, comprising 42% of all students with disabilities and approximately 5% of the overall school-age population (Cortiella & Horowitz, 2014). Students with LD, by definition, demonstrate significant difficulties in learning within one or more specific areas (i.e., reading, mathematics, oral and/or written expression, and listening comprehension), challenges that cannot be explained by limited cognitive abilities (e.g., Mellard, Deshler, & Barth, 2004). The child with LD demonstrates average to above-average cognitive capacity, yet still performs at levels significantly below his/her same-grade peers.

Traditionally, a child is identified with one or more LD via the documentation of a sizable discrepancy between his/her academic achievement and cognitive abilities as measured through standardized tests (Hallahan & Mercer, 2001). However, there have been many arguments against this discrepancy-based identification model, including variability in implementation between states and a reliance on intelligence tests for identification (e.g., D. Fuchs, Mock, Morgan, & Young, 2003; Vaughn & L. Fuchs, 2003). In addition, minority children are over-represented in the population of students identified with LD, with the percentage of minority students increasing from 32% to 45% between 1989 and 2009 (Ford, 2012). Therefore, a call for the comprehensive reexamination of assessment and evaluation of students with LD has been brought to the front and center of the field (National Joint Committee on Learning Disabilities [NJCLD], 2011).

To diagnose a child with LD, federal law stipulates that certain variables must be ruled out in relation to persistent learning difficulties: Specifically, the child's learning challenges cannot be caused by poor instruction, limited English proficiency, family and socioeconomic background, or concomitant disabilities (e.g., Hallahan & Mercer, 2001). To rule out poor instruction as a variable impacting the over-identification of students with LD, researchers proposed a new service delivery model that involves measurement of learners' response to research-based interventions (e.g., L. Fuchs & Fuchs, 1998). The update of the Individuals with Disabilities Education Improvement Act ([IDEIA], 2004) brought this model, commonly known as Response to Intervention (RTI), to national attention. The IDEIA provides the option to use "a process that determines if the child responds to scientific, research-based intervention as a part of the evaluation procedures" (IDEIA; 20 USC § 1400) for LD.

As a result of this significant amendment, federal regulations require each state to choose between the following options for the identification of students with LD: (a) permit or prohibit the traditional severe discrepancy diagnostic approach, (b) permit or prohibit RTI, and (c) permit or prohibit an alternate research-based approach (Zirkel & Thomas, 2010a). A snapshot of state departments of education completed in October 2011 found that 17 states now mandate RTI, denoting a substantial change in policy (Hauerwas, Brown, & Scott, 2013).

The present study explores school professionals' perceptions of readiness and beliefs about the RTI policy mandate upon its implementation in Illinois. Specifically, we sought to understand the variables that influence school professionals' beliefs about RTI, and if and how these variables differed across professions.

## **Literature Review**

Although RTI was initially promoted as a means of improving the identification of LD, as well as reducing the number of students who receive this disability classification, it quickly became perceived as a vehicle for broader educational reform (D. Fuchs, Fuchs, & Stecker, 2010). The economic impetus within the IDEIA (2004) enabled this shift of perception: States were permitted to utilize 15% of their special education monies to support the design and implementation of early intervention models involving RTI, preclusive of disability. RTI guidelines vary widely across states, from recommendations for practice to full-scale mandates with legal prohibition of the discrepancy model in the process of identifying LD (Hauerwas et al., 2013; Zirkel & Thomas, 2010b). To best understand the RTI movement across American schools, we first present an historical overview, followed by discussion of the variability in implementation as well its influence upon professional practice.

### **Foundations of RTI**

RTI can be defined as a multi-tiered assessment and intervention model designed to improve educational outcomes through research-based instructional methods aligned with student data. The earliest conceptualization of RTI involved four tiers of instruction, with the fourth tier being special education. School wide accountability for student progress was key to the framework (Heller, Holtzman, & Messick, 1982). Over time, however, the most commonly promoted RTI models came to exclude special education services and the outcomes of students

with disabilities (L. Fuchs, Fuchs, & Speece, 2002; Vaughn & L. Fuchs, 2003). RTI is now typically considered a general education reform framework, involving assessment and intervention that occurs prior to special education referral.

A primary goal of RTI is to strengthen general education so that all students have access to high quality, research-based instruction prior to disability classification, ostensibly ruling out poor instruction and/or lack of behavioral supports as variables that impact identification (Hollenbeck, 2007). Therefore, tier one is the general education classroom, but not a typical classroom—in a RTI framework tier one involves universal screening assessments to identify struggling learners in conjunction with differentiated, research-based instruction (e.g., NJCLD, 2005). Learners who are non-responsive to instruction in tier one over a prescribed period of time enter *tier two*, which typically involves small-group remedial instruction to help close the gap with peers, along with progress monitoring. Students who are non-responsive to this focused instruction over a prescribed period of time enter *tier three*, a more intensive level of intervention that may include daily remedial instruction as well as weekly progress monitoring. It is not until a student has progressed through multiple tiers of instruction and remained unsuccessful that a referral for special education can occur in some states.

There is currently no one model of RTI, although most share common characteristics, including tiers of progressively more intensive and individualized instruction, universal screening and research-based instruction in tier one, and progress monitoring and research-based intervention in tiers two and higher (e.g., NJCLD, 2005). Flexibility in RTI implementation is necessary given the limited research base, for the majority of early RTI studies did not investigate the model as a whole (Hollenbeck, 2007); rather, early research focused primarily on reading intervention in grades K-3 (e.g., O'Connor, Harty, & Fulmer, 2005; Speece, Case, & Eddy, 2003).

### **RTI Policy and Influence on Practice**

The vagueness of the reference to RTI in the IDEIA (2004) has allowed state departments of education great flexibility in the development of practice recommendations or mandates; therefore, RTI does not necessarily look the same from state to state or even district to district (e.g., Berkely, Bender, Peaster, & Saunders, 2009; Hauerwas et al., 2013). Some states require three tiers of intervention, while others require four. Some states implement RTI only in the primary grades, while others have expanded the framework to serve grades K-12. Furthermore, some states implement RTI only for academic concerns, while others target both academic and behavioral challenges, including the identification of disabilities beyond LD (Zirkel, 2011). At this time, 17 states mandate RTI data in the process of LD identification, and eight states prohibit the discrepancy-based formula (Hauerwas et al., 2013). This greater variability in identification methods was an early concern of a subgroup of researchers in the field of LD, who cautioned against throwing out “the baby with the bathwater” (e.g., Scruggs & Mastropieri, 2002) in relation to changing LD identification practices before establishing a solid research base.

The primary goal of RTI is not the identification of LD, however—the primary goal of RTI is

improved instruction (e.g., D. Fuchs et al., 2010). Therefore, RTI represents a significant shift in paradigm: from a student-centered deficit perspective in which the learner requires a disability label to receive specialized supports, to an ecological perspective in which students' struggles are viewed as responsive to teachers' informed and data-driven instruction (e.g., Buffum, Mattos, & Weber, 2010; Kozleski & Huber, 2010). Early RTI research indicates that the changes in philosophy and practice necessitated by RTI have an impact on professionals' roles within schools (e.g., Bean & Lillenstein, 2012; Larson & Choi, 2010; Sullivan & Long, 2010), as discussed next.

**School psychologists.** Examination of the literature across professions indicates that school psychologists have been at the forefront of investigations of professional practice in the context of RTI. The profession has been uniquely influenced by RTI, in that a central task of school psychologists, "assessment-for-classification" [of LD] (National Association of School Psychologists [NASP], 2006, p. 5), has been made optional or obsolete by some states (Hauerwas et al., 2013; Zirkel & Thomas, 2010a & b). To learn about the changing roles and responsibilities of school psychologists post-IDEIA (2004), Larson and Choi (2010) surveyed 189 school-based practitioners from a random sample of 500 NASP members. Analyses revealed a statistically significant difference in the amount of time that respondents were involved in certain tasks after IDEIA in comparison to before; however, these changing roles were not linked to RTI implementation status within schools. In contrast, Sullivan and Long (2010), in a survey of 557 NASP members, found that school psychologists who were actively involved with RTI spent up to 25% of their time implementing interventions, in comparison to 5% of those not actively involved with RTI.

**General and special educators.** To date, researchers in the fields of general and special education are just beginning to explore the question of professional practice in the context of RTI. Bean and Lillenstein (2012) found that reading professionals (specialists, coaches, and classroom teachers) were highly engaged in collaborative practices and teaming in RTI schools, a significant difference from pre-RTI conditions in the same buildings. In the first special education study of professional practice in the context of RTI, special educators discussed challenges in meeting the increased demands for paperwork and collaboration while serving a larger caseload of students within RTI schools (Swanson, Solis, Ciullo, & McKenna, 2012).

**Leaders.** Exploration of the RTI literature from an administrative perspective illustrates that the primary focus has been on knowledge for effective leadership (e.g., Crockett & Gillespie, 2007; King, Lemons, & Hill, 2012), with little to no attention to change in professional practices. Considering leadership more broadly, there is a rising call to consider RTI from a systemic perspective, addressing the interactions between state educational agencies, local educational agencies, and the particulars of school contexts, thus supporting sustained change in practice (e.g., Kozleski & Huber, 2010; O'Conner & Freeman, 2012). Overall, across professions, the study of the influence of RTI upon professional practice remains limited, as does investigation of school professionals' beliefs and attitudes about the reform.

## Purpose of the Study

Although educational policy is often enacted from the top down, the strength of any initiative lies in the hands of those school professionals who are ultimately responsible for implementation (Spillane, Reiser, & Reimer, 2002). Each individual—holding unique beliefs, attitudes, and emotions that influence how s/he interacts with new ideas—has an impact on the success of any new policy or reform (e.g., Hoekstra & Korthagen, 2011). Therefore, it becomes relevant to understand the perceptions and beliefs of professionals asked to enact change, for beliefs influence practice (e.g., Joram & Gabriele, 1998; Wubbels, 1992)- particularly relevant when a policy initiative (such as RTI) is premised upon a paradigm shift. At this time, there has been limited statewide examination of school professionals' RTI-related beliefs, knowledge, and attitudes following a mandated implementation deadline. Identifying and understanding the beliefs and attitudes of school-based professionals can inform future training initiatives as additional states move to mandate or refine RTI implementation.

## Research Questions

1. How confident are school professionals regarding various elements of RTI and their school leadership?
2. Is attitude toward RTI predicted by perceived competence with various elements of RTI, confidence in leadership, and/or demographics?
3. Are there differences in how the model explaining attitudes applies to different professional groups?

## Method

### Context

The Illinois State Board of Education (ISBE) was quick to pilot and subsequently require RTI (Adkins, 2007), mandating a statewide implementation deadline of September 2010 for K-12 academic and behavioral supports (ISBE, 2008). While the state did not explicitly forbid the use of the discrepancy formula for the identification of LD, it did mandate that application of this formula, with concomitant academic and intelligence testing, may be optional in the process of LD identification (ISBE, 2012). Furthermore, specific factors were delineated in relation to constructing RTI frameworks, such as the number of times that progress monitoring is required within tiers two (twice monthly) and three (weekly).

The following variables may be useful to understand the context of the state of Illinois. The student population is comprised of 51% of students who identify as White (52% nationally), 23% Hispanic (24% nationally), and 18% Black (16% nationally) (U.S. Department of Education, 2011a & b). Forty-four percent of students in Illinois are indicated as low income by their Free and Reduced Price Lunch status, in comparison to 48% of students nationally, and 8% are identified with Limited English Proficiency, in comparison to 13% nationwide (US Department of Education, 2011a & b).

## Participants

Members of professional organizations in Illinois with involvement in RTI were identified as potential participants for this study. Following Institutional Review Board permissions, a link to an electronic survey in conjunction with an informational sheet for research participants was disseminated to the membership of the following professional organizations: Illinois Association of School Administrators, Illinois Education Association, Illinois Reading Council, Illinois School Psychologist Association, and the Illinois Speech and Hearing Association. A total of 145 participants completed the survey. It is challenging to calculate the return rate, given that (a) some organizations posted the link on their website without any direct invitation to members, while others emailed the link directly to individuals; and (b) some members may have shared the link with other professionals within their field.

In exploring the characteristics of this sample, all 145 participants reported working in public school settings. Twenty-nine percent were school psychologists, with 25% general or special educators, 23% administrators, 17% speech-language pathologists, and 6% “other.” The overwhelming majority (79%) reported holding a master’s degree, with 70% noting five or more years since their last degree conferral. Eighty-two percent reported five years or more of practice in the field, with 61% at their current position for five years or more.

## Measures

The four-section survey was specifically created for the present study to explore participants’ perceptions, beliefs, and attitudes towards RTI, as well as demographics and exposure to RTI training. Section one of the survey included ten multiple-choice questions addressing demographics (e.g., highest degree obtained, number of years at current school). Section two involved eleven multiple-choice questions regarding how participants learned about RTI as well as the number and forms of trainings received (e.g., How many PD trainings have you received to date in relation to RTI? Who provided those trainings?). The third section included 21 Likert-type items as well as open-ended questions about perceived level of confidence for various aspects of RTI (e.g., How confident do you feel about using progress monitoring data to inform instruction?). Finally, the fourth section contained 13 Likert-type items addressing participants’ beliefs in relation to their practice, their students, and their school context (e.g., “I believe RTI can improve the academic and behavioral outcomes for students”).

The sections and items in the survey are rooted in literature indicating the importance of the following factors related to the core principles of RTI, as well as the components necessary in launching successful new initiatives: research-based components of RTI implementation (Hollenbeck, 2007; NJCLD, 2005); appropriate training for school-based professionals (e.g., Danielson, Doolittle, & Bradley, 2007; Kratochwill, Volpiansky, Clements, & Ball, 2007); the influence of number of years and educational background (Hargreaves, 2005; Palmer, Stough, Burdinski Jr., & Gonzales, 2005); and the role of leadership (Green & Cypress, 2009; Leithwood, Day, Sammons, Harris, & Hopkins, 2006).

## Procedure

The initial form of the instrument was completed by a small group of graduate students who were already certified teachers, and modifications were made based on feedback. In the piloting phase, 80 education professionals, including representatives across a variety of professions, completed the survey. Final modifications were made based on pilot feedback, and the finalized form of the survey was created for electronic dissemination using SurveyMonkey.

## Scales

For the purpose of this study's analyses, nine scales were constructed. As a measure of internal consistency, Cronbach's Alpha was computed for each of the nine scales (scale items and reliability coefficients are reported in Table 1; see Appendix). For scales with more than two items, Cronbach's Alpha was calculated with and without each of the scale's items to determine whether dropping an item would increase the scale's internal consistency. The majority of scales, seven out of nine, exhibited excellent internal consistency ( $\alpha > .9$ ). Two of the scales were in the good range ( $\alpha > .8$ ; Cortina, 1993). Alpha coefficients ranged from .825 to .941. There was no occasion in which the deletion of an item increased the alpha coefficient; therefore, no changes were made to the scales.

## Data Analysis

To address the first research question (How confident are school professionals regarding various elements of RTI and their school leadership?), descriptive statistics were generated to provide a picture of participants' degree of confidence in RTI training, as well as the extent to which they viewed RTI as a positive change. To address the second research question (Is attitude toward RTI predicted by perceived competence with various elements of RTI, confidence in leadership, and/or demographics?), a regression model was constructed. Specifically, the following independent variables were regressed on the dependent variable of the perceived benefit of RTI: highest degree, years since highest degree conferral, total years in practice, total years in current school, number of trainings received, and implementation date (after 2010). In addition, the following variables represent the perceived level of confidence of respondents across eight areas related to RTI: background knowledge, roles and responsibilities, tiered service delivery model research-based practices, data collection and management, collaborative practices, special education referral, and leadership competence.

Variance Inflation Factors (VIF) were calculated to test for multicollinearity in relation to the regression model. All VIFs were under 4, well below the 10 threshold that is used as a rule of thumb to raise concerns regarding multicollinearity (O'Brien, 2007; Stevens, 1992). Additionally, White's (1980) heteroskedasticity test was performed to determine whether the error term in the regression model had constant variance, to avoid using biased standard errors that would lead to invalid inference. Since White's test indicated the existence of heteroskedasticity ( $\chi^2=42.4$ ;  $p<.05$ ), the regression model was estimated with White's correction for the standard errors.

To address the third question (Are there differences in how the model explaining attitudes applies to different professional groups?), determining if the model applied differently for different groups of professionals was investigated first. The only group for which there was an indication that the model applied differently was school psychologists. Chow's test of structural stability was then performed (Chow, 1960), and the F test was significant ( $F=2.264$ ;  $p<.01$ ). Having rejected the null hypothesis, the model was subsequently run separately for school psychologists and other school professionals.

## Results

### Descriptive Statistics

Thirty-seven percent of participants reported that they first heard about RTI at either a building-level or a district-level meeting. Sixty-six percent reported they received six or more professional development (PD) trainings about RTI-related issues. The majority received some training at the district level (79%), with building-level (55%) and state-level (48%) following as most common levels of training. Interestingly, 88% reported their school was using some form of RTI prior to the 2010-2011 school year, when implementation became mandated by the state.

Table 2 includes the percentages of reported confidence in various aspects of RTI. The top three items about which respondents reported high confidence were the underlying rationale (68%) and anticipated benefits of RTI (70%), as well as the principles of the general tiered service-delivery model (70%). The bottom three items about which participants reported little confidence were research-based practices in mathematics and behavior (15% and 23%, respectively), and the function of parent involvement in the RTI framework (15%). Regarding attitudes toward RTI, the top two items respondents strongly agreed with were belief in the potential benefits of an RTI framework (65%) and the potential to improve academic and behavioral outcomes for all students (62%). The items that received the lowest "strongly agree" percentages included the belief that (a) the majority of respondents' colleagues were in favor of an RTI framework (19%), and (b) the principal seemed highly knowledgeable about RTI (17%) (see Table 3 for all reported percentages).

Table 2  
*Confidence on Different Aspects of RTI*

	No Training	Little Confidence	Some Confidence	High Confidence
	Percent			
Historical overview of RTI	3	17	36	44
Underlying rationale of RTI	1	5	26	68
Anticipated benefits of RTI	1	3	26	70
Tiered service-delivery model—general	0	6	24	70
Tiered service delivery model—school specific	0	12	39	49
Role and responsibilities across tiers	1	14	37	48
Research-based practices: Basic reading skills and fluency	2	15	41	42
Research-based practices: Reading comprehension	2	18	50	30
Research-based practices: Mathematics	8	36	41	15
Research-based practices: Behavior	8	25	44	23
Specific interventions for tiers 2 and 3	2	19	44	35
Screening process to identify at-risk students	1	11	34	54
Progress monitoring methods	1	10	37	52
Using progress monitoring data to inform instruction	2	11	37	50
School-wide data management system	1	20	34	45
Parental involvement in an RTI framework	6	26	53	15
Collaborative practices in an RTI framework	1	18	42	39
Problem-solving model, your specific roles and responsibilities	1	19	43	37
Referral for special education services in an RTI framework	1	20	39	40
Use of RTI data for special education eligibility	0	20	38	42
Determine lack of responsiveness to Intervention to identify LDs	0	28	42	30

Table 3

*Attitudes Toward RTI*

	Strongly Disagree	Disagree	Agree	Strongly Agree
	Percent			
<b>Benefits of RTI</b>				
Believe in the potential benefits of an RTI framework	2	4	29	65
RTI is the best option to support struggling learners	3	8	46	43
Can improve academic and behavioral outcomes for all	2	3	33	62
Implementation of RTI positive change for students	1	5	37	57
<b>RTI and Learning Disabilities</b>				
Change in process for identifying students with LDs is necessary	3	14	37	46
RTI is a good way to identify students with a LD	3	9	52	36
<b>Principal Preparedness and Support</b>				
Principal introduced RTI in a positive, enthusiastic manner	5	19	39	37
Principal appears highly knowledgeable about RTI	6	22	40	32
<b>School Climate towards RTI</b>				
Teacher RTI questions/concerns addressed in positive manner	4	15	49	32
Majority of colleagues in favor of an RTI framework	7	22	52	19
Implementation of RTI positive change for school	2	9	46	43
The climate in school regarding RTI is positive	5	24	54	17

## Model Testing

The full regression model with White's correction for standard errors accounted for 55% of the variance in perception of RTI being a beneficial change. Five variables were statistically significant: perceived leadership competence ( $\beta=.500$ ;  $p<.001$ ; a strong knowledge of the historical rationale underlying RTI ( $\beta=.241$ ;  $p<.01$ ); confidence in applying research-based interventions in various subject matters and tiers ( $\beta=-.195$ ;  $p<.05$ ); confidence in using RTI for referring students to special education ( $\beta=.186$   $p<.05$ ); and years in the field ( $\beta=-.140$   $p<.05$ ). Table 4 includes both standardized and unstandardized coefficients.

Table 4

*Estimated Coefficients of Full Model with White's Correction for Standard Errors<sup>@</sup>*

Variable Name	Coefficients
Total years in the field	-.140 (-.091)
Years at current school	-.006 (-.033)
Highest degree obtained	-.059 (-.049)
Years since highest degree conferral	.023 (.015)
Number of RTI trainings received	-.041 (-.021)
RTI implementation prior to 2010	.023 (.038)
Leadership competence	.499*** (.389)
RTI background information	.240** (.204)
Data collection and management	.100 (.084)
Tier service model delivery	.017 (.017)
Research-based interventions	-.195* (-.161)
Collaborative practices	.157 (.126)
Responsibilities and benefits	.038 (.037)
Special education referral	.186* (.145)

<sup>@</sup> Metric coefficients are given in parentheses

\* $p<.05$ ; \*\* $p<.01$ ; \*\*\* $p<.001$

When applied to school psychologists only, the model with White's correction for standard errors explained 64% of the variance in perception of RTI as a beneficial change. Three variables were statistically significant—perceived leadership competence ( $\beta=.507$ ;  $p<.01$ ; understanding responsibilities within and the benefits of RTI ( $\beta=.424$ ;  $p<.05$ ); and confidence in applying research-based interventions in various subject matters and tiers ( $\beta=-.242$ ;  $p<.05$ ). When applied to other school professionals (non-school psychologists), the model with White's correction for standard errors explained 66% of the variance in perceptions of RTI being a beneficial change. Four variables were statistically significant: Perceived leadership competence ( $\beta=.538$ ;  $p<.001$ ); confidence in collecting and managing RTI data ( $\beta=.256$ ;  $p<.05$ ); confidence in using RTI for referring students to special education ( $\beta=.234$ ;  $p<.01$ ); and highest degree obtained ( $\beta=-.103$ ;  $p<.05$ ). Table 5 includes the standardized and unstandardized coefficients for school professionals other than school psychologists.

Table 5

*Estimated Coefficients of Model for School Psychologists-only and other School Professionals with White's Correction for Standard Errors<sup>@</sup>*

Variable Name	School Psychologists	Other School Professionals
Total years in the field	-.259 (-.139)	-.113 (-.078)
Years at current school	.056 (.025)	-.017 (-.008)
Highest degree obtained	-.155 (-.103)	-.103* (-.091)
Years since highest degree conferral	.367 (.198)	-.095 (-.069)
Number of RTI trainings received	.038 (.031)	-.103 (-.055)
RTI implementation prior to 2010	.096 (.101)	.032 (.069)
Leadership competence	.507** (.310)	.538*** (.473)
RTI background information	.064 (.068)	.163 (.143)
Data collection and management	-.181 (-.123)	.256* (.231)
Tier service model delivery	-.078 (-.088)	-.013 (-.012)
Research-based interventions	-.242* (-.182)	-.124 (-.105)
Collaborative practices	.097 (.069)	.107 (.089)
Responsibilities and benefits	.424* (.431)	-.044 (-.042)
Special education referral	-.113 (-.080)	.234** (.188)

@ Metric coefficients are given in parentheses.

\* p<.05; \*\* p<.01; p<.001

## **Discussion**

Given the significant changes in federal and state laws that have led to mandates for RTI implementation, this study sought to illuminate school-based professionals' related attitudes, beliefs, and perceived sense of competence. Through analysis, both common and differentiated variables were found to influence the attitudes of school-based professionals across disciplines about RTI.

### **Common Variable: Leadership**

The most robust finding of this study is the impact of perceptions of leadership on professionals' attitudes toward RTI, regardless of disciplinary focus. School professionals who had confidence in their leadership, including a positive, knowledgeable principal and other informed leaders, had more favorable attitudes about RTI and its intended benefits. Principal leadership has long been demonstrated as a central and necessary element of educational reform (e.g., Leithwood et al., 2006). The importance of leadership makes it an essential element of educational change, worthy of closer consideration when enacting policy, particularly in regards to training.

### **Differentiated Variables: School Psychologists and Other School Professionals**

Although the model explained about 65% of the variance for school psychologists and other school professionals, there were no common variables outside of leadership competence, possibly indicating differentiated training needs across professions. School psychologists were more likely to view RTI as a positive change when they felt confident in relation to specific responsibilities within their schools, as well as in regards to the intended benefits of RTI. Since the advent of RTI has high potential to influence the roles and responsibilities of school psychologists (e.g., NASP, 2006; Sullivan & Long, 2010), practitioners may consequently view RTI in a more positive manner when they have a clear picture of their day-to-day practice and understand the rationale for changes. Interestingly, however, school psychologists were less likely to perceive RTI as a positive change when they felt confident in applying research-based interventions in various subject matters and tiers. This outcome may reflect concern about the most appropriate tasks for school psychologists within an RTI framework: In practice, some may have reservations about taking on new roles at the expense of other roles they view as more central to their profession. This finding warrants further investigation to better understand the professional tensions at play when implementing RTI.

A different set of variables beyond leadership influenced the perceptions of other school professionals. The first, highest degree obtained, had a negative influence on professionals' views of RTI. Overall, the effect of educational level on school professionals' attitudes and beliefs appears variable within the research literature, with the strongest positive impact on the beliefs and attitudes of individuals obtaining an initial degree (e.g., Rimm-Kaufman & Sawyer, 2004; Vartuli, 2005). Continuing, other school professionals were more likely to view RTI as positive when they felt confident in collecting and managing data. Although assessment practices

such as universal screening and progress monitoring have an extensive research base (e.g., Deno, 1985; Shinn, 2007) they were not widely implemented in schools prior to the IDEIA (e.g., E. Mesmer & Mesmer, 2008). Therefore, an understanding of how to conduct and interpret such assessments may further support positive attitudes toward RTI, as the framework requires extensive data use in relation to instruction and student movement within tiers.

A third variable, confidence in referring students for special education in an RTI framework also had a positive impact on the perceptions of non-school psychologists. It is noteworthy that at the center of a collective reform promoting joint accountability for student outcomes, referral to special education was still perceived as necessary and important by non-school psychologists. This finding may indicate the lack of a necessary paradigm shift for many school professionals, as it hints at the importance of “referring out” struggling learners rather than assuming accountability for the success of all students within the general education classroom (e.g., Orosco & Klingner, 2010). Further investigation of the effects of RTI on beliefs about teaching, learning, and accountability for the growth of all learners is warranted.

### **Limitations**

Although this study provides important information regarding the effects of RTI training on school professionals’ confidence and perceptions in the context of substantial statewide implementation, some limitations must be recognized. First, inherent in survey research is the potential influence of the self-selectivity of participants on study outcomes. Based on this argument, the sample used in this study may not be representative of the broader membership of practicing school professionals, therefore limiting the generalizability of findings. Furthermore, the lack of data regarding participants’ gender, ethnicity, and age makes it difficult to ascertain if the sample represents the broader population of school professional across the state. An additional limitation of any anonymous, self-reported information is the lack of verification of reported data, as well as the confirmation that only eligible individuals filled out the survey.

### **Implications for Practice and Research**

Informed and proactive leadership stands out as the central factor that influenced school professionals’ beliefs about, and attitudes toward, RTI. It therefore seems logical that an investment of state training funds in the systematic, in-depth, professional development of principals well in advance of large-scale reform could impact the success of policy initiatives. An effective principal serves as an “optimizer,” providing a positive, yet situational-specific and realistic, perspective on major change (Marzano, Waters, & McNulty, 2005, p. 21). The principal who presents reform as a purely bureaucratic mandate, or as “one of many” initiatives that do not need to be embraced and nurtured, cannot create meaningful, sustained change (Leithwood et al., 2006; Penlington et al., 2008). Ultimately, the principal’s role as change agent, demonstrated as essential to the success of reform (Fullan, 2002; Green & Cypress, 2009), would be best reinforced by in-depth training to support change in policy, paradigm, and practice.

Simultaneously, evidence of the importance of distributed leadership (Leithwood et al., 2006; Penlington et al., 2008), reinforced by this study, illustrates the necessity of providing in- depth

training to additional professionals within schools. Such a focus could be cost-effective, as discipline-specific leaders could gain the knowledge and understanding needed to motivate and support colleagues (e.g., Levin, 1988). In the context of statewide initiatives when the cost of training can be high, and under current economic conditions and tight funding, targeted trainings can also be cost-beneficial, potentially the best approach for effective knowledge dissemination on a broad scale (e.g., Hummel-Rossi & Ashdown, 2002).

Traditional PD tends to be “one-size-fits-all,” with common goals across all in attendance, regardless of profession or level of experience (Lieberman & Mace, 2008, p. 227). However, results of this survey indicate this general, broad-brush approach to training may not be most effective. Indeed, it may be cost-efficient to develop training to support specific groups of professionals, taking into account factors such as prior knowledge and the involvement of the broader professional field. This may help professionals feel more confident about how the reform specifically influences their practice—which in turn may influence their attitudes and beliefs about the initiative as a whole.

The results of this study illustrate the challenge of changing a paradigm, or creating a significant shift in the assumptions underlying student learning, while simultaneously changing practices. Viewing RTI from a traditional student-deficit centered perspective may lead educators to regard it as a process that inhibits or delays referral to special education (Orosco & Klingner, 2010). It is therefore important to design PD carefully, so that participants first come to understand the theoretical foundation and *need* for the change, before turning attention to the concrete steps necessary for implementation. Without placing an emphasis on the shift from student deficit to teacher accountability for improved instruction, it is fully possible to change practices without influencing beliefs about teaching and learning (Spillane et al., 2002), leading professionals to view policy as unnecessary and/or prohibitive.

In conclusion, this study, an examination of school professionals’ attitudes and beliefs about RTI in light of a statewide implementation deadline, raises considerations for future research and practice in enacting wide-scale educational change. States or districts may benefit from consideration of the following points well in advance of policy implementation:

- What are the theoretical foundations of this change? In other words, why is this change necessary within our state, district, or school?
- What is fundamentally different about this initiative, in comparison to current practices? What beliefs do we need to change about teaching and learning?
- How will we ensure that our leaders are optimally prepared so they can provide positive and effective training within their schools?
- What school or district-wide professionals may have the background and experience to lead in this area, and should thus be targeted for extensive PD?
- How can we differentiate PD in a cost-effective manner to support the needs of different professional groups, grade levels, etc.?

- What specific roles will different disciplines play in regards to this reform? In what specific ways will this reform change current practices, and what supports might professionals need to make such changes?
- How can we facilitate collaboration in support of this initiative, across the state and within districts, as well as within schools?

Further investigation of how educational policy is translated into practice in other states can determine the validity of such considerations, as might the study of exemplars—those districts or schools that have been successful in enacting meaningful change. RTI provides a new window on the path from policy to practice. Its successful implementation calls for a fundamental shift in thinking about student learning and educational practice, with the goal of improving outcomes for all students.

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## References

- Adkins, G. (2007, November). State pilots sweeping changes in special ed. *The Education Digest*. Retrieved from [www.eddigest.com](http://www.eddigest.com)
- Bean, R., & Lillenstein, J. (2012). Response to intervention and the changing roles of schoolwide personnel. *The Reading Teacher*, 65(7), 491-501. doi: [10.1002/TRTR.01073](https://doi.org/10.1002/TRTR.01073)
- Berkeley, S., Bender, W. N., Peaster, L. G., & Saunders, L. (2009). Implementation of response to intervention: A snapshot of progress. *Journal of Learning Disabilities*, 42, 85-95. doi: [10.1177/0022219408326214](https://doi.org/10.1177/0022219408326214)
- Buffum, A., Mattos, M., & Weber, C. (2010). The why behind RTI. *Educational Leadership*, 68, 10-16.
- Chow, G. C. (1960). Tests of equality between sets of coefficients in two linear regressions. *Econometrica*, 28(3), 591-605. doi: [10.2307/1910133](https://doi.org/10.2307/1910133)
- Cortiella, C., & Horowitz, S. H. (2014). *The state of learning disabilities: Facts, trends and emerging issues*. New York: National Center for Learning Disabilities. Retrieved from <http://www.nclد.org/images/content/files/stateofd2014/2014%20State%20of%20LD%20FINAL%20FOR%20RELEASE.pdf>
- Cortina, J. M. (1993). What is coefficient alpha? An examination of theory and applications. *Journal of Applied Psychology*, 78, 98-104. doi: [1037/0021-9010.78.1.98](https://doi.org/10.1037/0021-9010.78.1.98)
- Crockett, J. B., & Gillespie, D. N. (2007). Getting ready for RTI: A principal's guide to response to intervention. *ERS Spectrum*, 25(4), 1-9.
- Danielson, L., Doolittle, J., & Bradley, R. (2007). Professional development, capacity building, and research needs: Critical issues for response to intervention implementation. *School Psychology Review*, 36, 632-637.
- Deno, S. L. (1985). Curriculum-based measurement: The emerging alternative. *Exceptional Children*, 52, 219-232.
- Ford, D. (2012). Culturally different students in special education: Looking backward to move forward. *Exceptional Children*, 78(4), 391-405.
- Fuchs, D., Fuchs, L. S., & Stecker, P. M. (2010). The "blurring" of special education in a new continuum of general education placements and services. *Exceptional Children*, 76, 301-323.

- Fuchs, D., Mock, D., Morgan, P. L., & Young, C. L. (2003). Responsiveness-to-intervention: Definitions, evidence, and implications for the learning disabilities construct. *Learning Disabilities Research & Practice, 18*, 157-171. doi: [10.1111/1540-5826.00072](https://doi.org/10.1111/1540-5826.00072)
- Fuchs, L. S., & Fuchs, D. (1998). Treatment validity: A unifying concept for reconceptualizing the identification of learning disabilities. *Learning Disabilities Research & Practice, 13*, 204–219.
- Fuchs, L. S., Fuchs, D., & Speece, D. L. (2002). Treatment validity as a unifying construct for identifying learning disabilities. *Learning Disability Quarterly, 25*, 33-44. doi:[10.2307/1511189](https://doi.org/10.2307/1511189)
- Fullan, M. (2002). The change leader. *Educational Leadership, 59*(8), 16-21.
- Green, R. & Cypress, S. L. (2009). Instructional leadership: A model for change in alternative middle schools. *Middle Grades Research Journal, 4*(3), 19-40.
- Hallahan, D. P. & Mercer, C. D. (2001). *Learning disabilities: Historical perspectives*. Paper written for the Office of Special Education Programs, US. Department of Education, and presented at the OSEP's LD Summit Conference. Retrieved from <http://www.nrcld.org/resources/ldsummit/hallahan.pdf>
- Hargreaves, A. (2005). Educational change takes ages: Life, career and generational factors in teachers' emotional responses to educational change. *Teaching and Teacher Education, 21*, 967–983. doi: 10.1016/j.tate.2005.06.007
- Hauerwas, L. B., Brown, R., & Scott, A. N. (2013). Specific learning disability and Response to Intervention: State-level guidance. *Exceptional Children, 80*(1), 101-120.
- Heller, K. A., Holtzman, W., & Messick, S. (Eds.). (1982). *Placing children in special education: A strategy for equity* (pp. 322–381). Washington, DC: National Academy Press.
- Hoekstra, A., & Korthagen, F. (2011). Teacher learning in a context of educational change: Informal learning versus systematically supported learning. *Journal of Teacher Education, 62*(1), 76-92.
- Hollenbeck, A. F. (2007). From IDEA to implementation: A discussion of foundational and future responsiveness-to-intervention research. *Learning Disabilities Research & Practice, 22*(2), 137-146.

- Hummel-Rossi, B., & Ashdown, J. (2002). The state of cost-benefit and cost-effectiveness analysis in education. *Review of Educational Research*, 72(1), 1-30. doi:10.3102/00346543072001001
- Individuals with Disabilities Education Improvement Act (IDEA) of 2004, PL 108–446, 20 USC §§ 1400 *et seq.*
- Illinois State Board of Education (2008). *The Illinois state Response to Intervention (RtI) plan*. Retrieved from [http://www.isbe.net/RtI\\_plan/default.htm](http://www.isbe.net/RtI_plan/default.htm)
- Illinois State Board of Education (2012). *Illinois special education eligibility and entitlement procedures and criteria within a Response to Intervention (RTI) framework*. Retrieved from [http://www.isbe.net/speced/pdfs/sped\\_rti\\_framework.pdf](http://www.isbe.net/speced/pdfs/sped_rti_framework.pdf)
- Joram, E., & Gabriele, A. (1998). Preservice teachers' prior beliefs: Transforming obstacles into opportunities. *Teaching and Teacher Education*, 14, 175-191.
- King, S. A., Lemons, C. J., & Hill, D. R. (2011). Response to Intervention in secondary schools: Considerations for administrators. *NAASP Bulletin*, 20(10), 1-18. doi: 10.1177/0192636511430551.
- Kozleski, E. B., & Huber, J. J. (2010). Systemic change for RTI: Key shifts for practice. *Theory Into Practice*, 49, 258–264. doi: 10.1080/00405841.2010.510696
- Kratochwill, T. R., Volpiansky, P., Clements, M., & Ball, C. (2007). Professional development in implementing and sustaining multitier prevention models: Implications for Response to Intervention. *School Psychology Review*, 36, 618-631.
- Larson, J. P., & Choi, H. S. (2010). The effect of university training and educational legislation on the role and function of school psychologists. *Journal of Applied School Psychology*, 26, 97-144. doi: 10.1080/15377900903433336
- Leithwood, K., Day, C., Sammons, P., Harris, A., & Hopkins, D. (2006). Seven strong claims about successful school leadership. Nottingham, UK: National College for School Leadership. Retrieved from <http://www.leadershipinnovationsteam.com/files/seven-strong-claims.pdf>
- Levin, H. M. (1988). Cost-effectiveness and educational policy. *Educational Evaluation and Policy Analysis*, 10(5), 51-69. doi: 10.3102/01623737010001051.
- Lieberman, A., & Mace, D. H. P. (2008). Teacher learning: The key to educational reform. *Journal of Teacher Education*, 59, 226-234. doi: 10.1177/0022487108317020

- Marzano, R., Waters, T., & McNulty, B. (2005). *School leadership that works*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Mellard, D. F., Deshler, D. D., & Barth, A. (2004). Learning disabilities identification: It's not simply a matter of building a better mousetrap. *Learning Disability Quarterly*, 27, 229-242.
- Mesmer, E. M., & Mesmer, H. A. E. (2008). Response to intervention (RTI): What teachers of reading need to know. *Reading Teacher*, 62, 280-290.
- National Association of School Psychologists (2006). The role of the school psychologist in the RTI process. Bethesda, MD: Author. Retrieved from [http://www.nasponline.org/advocacy/RTIrole\\_NASP.pdf](http://www.nasponline.org/advocacy/RTIrole_NASP.pdf)
- National Joint Committee on Learning Disabilities. (2005). Responsiveness to intervention and learning disabilities. *Learning Disabilities Quarterly*, 28, 249-260.
- National Joint Committee on Learning Disabilities. (2011). Comprehensive assessment and evaluation of students with learning disabilities. *Learning Disability Quarterly*, 34(1), 3-16.
- O'Brien, R. M. (2007). A caution regarding rules of thumb for Variance Inflation Factors. *Quality and Quantity*, 41(5), 673-690. doi: [10.1007/s11135-006-9018-6](https://doi.org/10.1007/s11135-006-9018-6)
- O' Connor, E. P., & Freeman, E. W. (2012). District level considerations in supporting and sustaining RTI implementation. *Psychology in the Schools*, 49(3), 297-310. doi:10.1002/pits.21598
- O'Connor, R. E., Harty, K. R., & Fulmer, D. (2005). Tiers of intervention in kindergarten through third grade. *Journal of Learning Disabilities*, 38, 532-538.
- Orosco, M. J., & Klinger, J. (2010). One school's implementation of RTI with English language learners: "Referring into RTI." *Journal of Learning Disabilities*, 43, 269-288. doi:10.1177/0022219409355474
- Palmer, D. J., Stough, L. M., Burdinski Jr., T. K., & Gonzales, M. (2005). Identifying teacher expertise: An examination of researchers' decision making. *Educational Psychologist*, 40, 13-25. doi: [10.1207/s15326985ep4001\\_2](https://doi.org/10.1207/s15326985ep4001_2)
- Penlington, C., Kington, A., & Day, C. (2008). Leadership in improving schools: A qualitative perspective. *School Leadership & Management: Formerly School Organisation*, 28(1), 65-82. doi: <http://dx.doi.org/10.1080/13632430701800086>

- Rimm-Kaufman, S. E., & Sawyer, B. E. (2004). Primary-grade teachers' self-efficacy beliefs, attitudes toward teaching, and discipline and teaching practice priorities in relation to the "Responsive Classroom" approach. *The Elementary School Journal*, *104*, 321-341. Retrieved from <http://www.jstor.org/stable/3202945>
- Scruggs, T. E., & Mastropieri, M. A. (2002). On babies and bathwater: Addressing the problems of identification of learning disabilities. *Learning Disability Quarterly*, *25*, 155-168.
- Shinn, M. R. (2007). Identifying students at risk, monitoring performance, and determining eligibility within Response to Intervention: Research on educational need and benefit. *School Psychology Review*, *36*, 601-617.
- Speece, D. L., Case, L. P., & Eddy, D. M. (2003). Responsiveness to general education instruction as the first gate to LD identification. *Learning Disabilities Research & Practice*, *18*, 147-156.
- Spillane, J. P., Reiser, B. J., & Reimer, T. (2002). Policy implementation and cognition: Reframing and refocusing implementation research. *Review of Educational Research*, *72*, 387-431. doi: [10.3102/00346543072003387](https://doi.org/10.3102/00346543072003387).
- Stevens, J. (1992). Applied multivariate statistics for the social sciences. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Sullivan, A. L., & Long, L. (2010). Examining the changing landscape of school psychology practice: A survey of school-based practitioners' training and involvement in RTI. *Psychology in the Schools*, *47*, 1059-1079. doi: 10.1002/pits.20524
- Swanson, E., Solis, M., Ciullo, S., & McKenna, J. W. (2012). Special education teachers' perceptions and instructional practices in Response to Intervention implementation. *Learning Disabilities Quarterly*, *35*(2), 115-126. doi: 10.1177/0731948711432510
- US Department of Education (2011a). ED data express: National snapshot. Retrieved from <http://eddataexpress.ed.gov/state-report.cfm/state/US/>
- US Department of Education (2011b). ED data express: Illinois state snapshot. Retrieved from <http://www.eddataexpress.ed.gov/state-report.cfm?state=IL>
- Vartuli, S. (2005). Beliefs: The heart of teaching. *Young Children*, *60*(5), 76-86.
- Vaughn, S., & Fuchs, L. S. (2003). Redefining learning disabilities as inadequate response to instruction: The promise and potential problems. *Learning Disabilities Research & Practice*, *18*, 137-146. doi: 10.1111/1540-5826.000070.

- White, H. (1980). A heteroskedasticity-consistent covariance matrix estimator and a direct test for heteroskedasticity. *Econometrica*, 48, 817-838.
- Wubbels, T. (1992). Taking account of student teachers' preconceptions. *Teaching and Teacher Education*, 8, 137-149.
- Zirkel, P. A. (2011). State laws and guidelines for RTI: Additional implementation features. Retrieved from <http://www.nasponline.org/publications/cq/39/7/professional-practice-state-laws.aspx>
- Zirkel, P. A., & Thomas, L. B. (2010a). State laws and guidelines for implementing RTI. *Teaching Exceptional Children*, 43, 60-73.
- Zirkel, P. A., & Thomas, L. B. (2010b). State laws for RTI: An updated snapshot. *Teaching Exceptional Children*, 42(3), 56-63.

Table 1  
*Scale Items and Cronbach's Alpha Coefficients*

Variables	Items	Cronbach's $\alpha$
RTI Background Information	Historical overview Underlying rationale	.825
Responsibilities & benefits	Anticipated benefits Roles and responsibilities across tiers	.989
Tier service delivery model	Tier service delivery model (general) Tier service delivery model (specific to one's school)	.832
Research-based practices	- in basic reading skills - in reading comprehension - in mathematics - in behavior - interventions in tiers 2 & 3	.907
Data collection & management	Screening process to identify at risk students Progress monitoring methods Monitoring to inform instruction School-wide data management	.930
Collaborative practices	Collaborative practices in RTI Problem solving model roles & responsibilities Parental involvement in RTI	.912
Special Education referral	Use RTI data for special education eligibility Referral for special education services Determine lack of responsiveness to intervention to identify LD	.941
School building leadership & RTI competence	Principal introduced RTI in a positive enthusiastic manner Principal appears highly knowledgeable about RTI Other building-level leaders highly knowledgeable about RTI Teacher questions and concerns were addressed in a positive manner	.903

RTI viewed as a beneficial	<p>RTI best option to support struggling learners</p> <p>I believe in the potential benefits of an RTI framework</p> <p>Can improve the academic and behavioral outcomes of all students</p> <p>The implementation of RTI is a positive change for my school</p> <p>Necessary change in identifying students with LD</p> <p>Majority of colleagues in favor of RTI</p> <p>The implementation of RTI is a positive change for students</p> <p>The climate in school regarding RTI is positive</p> <p>RTI is a good way of identifying students with LD</p>	.919
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