Principals’ Leadership Support for Intervention in the Middle Grades

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This dissertation titled
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Abstract

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Principals’ Receptivity to Response to Intervention in the Middle Grades

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The research described in this dissertation focuses on the extent to which various conditions are associated with middle school principals’ leadership support for Response to Intervention (RTI), a recently mandated method of providing assistance to struggling students. As schools’ instructional leaders, principals play a critical role in implementing new initiatives, including special interventions such as RTI. According to many commentators, the principal is the most influential individual in a school and takes ultimate responsibility for the education and all other activities that occur there. Although teachers have the most obvious and immediate impact on the learning process, principals are, in theory, positioned to ensure that effective instruction is provided to every student.

Despite their important role, principals do not demonstrate equal capacity or willingness to implement and sustain systems of support for students. The study examined the influence of certain conditions on middle school principals’ willingness to support RTI. The variables with potential influence on principals’ leadership support were: (1) the length of principals’ teaching and administrative experience, (2) their experience as general or special educators (or both), and (3) their predominant instructional philosophy.

Data for the study came from a survey of middle-school principals in Ohio. The survey elicited information from principals including their levels of experience, gender,
and instructional philosophy. They also responded to items on a scale that was developed for use in the dissertation study. This scale, the Leadership Support of Intervention Scale (LSIS) contained 14 items designed to gather information on principals’ actions in support of instructional interventions.

Data analysis using multiple regression methods showed that the independent variables were significant predictors of scores on the LSIS. The independent variables that were significant predictors in the regression models were also significantly correlated (via zero-order correlation) with LSIS scores. These variables were: (1) principals’ instructional philosophies, (2) their years of experience as teachers, and (3) their experience as general educators. An ancillary analysis using stepwise regression also showed that gender was a significant predictor of LSIS scores.

Based on findings from the study, the researcher offered recommendations for practice, policy, and further research. Among the recommendations were the following five targeting educational practice: (1) as part of the interview and hiring process, human resource departments and interview committees should consider talking with each potential new principal about his or her previous experience working with students with special needs; (2) districts should consider providing targeted professional development and training opportunities to principals whose sole or primary classroom teaching experience has been in general education; (3) as part of the individualized professional development planning process, principals might want to incorporate professional development opportunities that focus on leadership support for interventions; (4) districts might benefit from the practice of providing on-going professional development
opportunities to help their teachers and administrators learn more about inclusive practices and intervention strategies; and (5) as part of their principal preparation programs, institutions of higher learning might want to increase their requirements for coursework and field experiences focusing on RTI and other inclusive practices.
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Chapter One

Background

The research undertaken in this dissertation focuses on the extent to which various conditions are associated with middle school principals’ receptivity to Response to Intervention (RTI), a recently mandated method of providing assistance to struggling students. As middle schools’ instructional leaders, their principals play a critical role in implementing new initiatives, including special interventions such as RTI.

The RTI method includes a series of steps that engage teachers and principals in systematic planning for the needs of struggling students. The steps in the RTI process, as outlined by McCook (2007) are:

1. Universal screening of all students,
2. Measurable definition of problem area to be targeted (i.e. academic, behavioral deficit, etc.),
3. Collection of baseline data prior to initiating an intervention,
4. Establishment of a written plan to outline interventions, data collection, staffing, and systems of accountability,
5. Progress monitoring,
6. Comparison of pre- and post-intervention data to establish the efficacy of the intervention. (p.13)

Although principals are required by the “No Child Left Behind” Act (NCLB) to implement some type of RTI, the degree to which they support, initiate, and effectively use this approach probably spans a broad continuum. Research on principals’ responses
to other mandates shows considerable variability in levels of implementation (Klecker & Loadman, 2000, p. 214). Similarly, their receptivity to the conceptual foundations of the RTI model, which is a precursor to its use, is also likely to exhibit variability. Moreover, variability in levels of receptivity may be dependent on particular circumstances.

Receptivity is defined as the openness or willingness to entertain an idea or change (Rosenberg & Turner, 1981, p. 643). Viewing receptivity to RTI as the dependent variable, this study investigated independent variables with potential to either enhance or interfere with middle school principals’ receptivity to RTI. The independent variables that the study investigated were the principal’s instructional philosophy (teacher- or student-centered), tenure as a teacher, tenure as a principal, and experience as a general or special educator or both.

The first purpose of this chapter is to explain Response to Intervention and discuss the middle school principal’s role in implementing it. The chapter will then turn to a discussion of circumstances with the potential to influence middle school principals’ receptivity to RTI. This discussion supports the statement of the problem and the research questions that provided a basis for the study. The chapter concludes with a consideration of the significance of the study and its conceptual limitations.

**Response to intervention.**

Schools in the United States strive to promote the achievement of all students (Darling-Hammond, 2004, p. 15). Nevertheless, they face challenges in doing so; students’ different rates and modes of learning represent one set of significant challenges. Students whose learning rates are slower than average often struggle with academic work
(Fuchs, 2003). In the past, schools have either allowed these students to struggle through the general curriculum or have provided them with special education services (Kemp & Eaton, 2008, p. 5).

New federal legislation requires schools to provide more options for students who learn at slower rates or through different modalities than their peers. The espoused goal of this legislation, the “No Child Left Behind” Act (NCLB, 2002), is to improve education and raise levels of achievement for all groups of students, especially underperforming groups such as students of color, students living in poverty, and students with disabilities (Darling-Hammond, 2004, p. 3). The accountability measures and state reporting systems mandated by NCLB require schools to document their progress toward assuring that every child makes adequate yearly progress.

In response to these legislative requirements, districts have changed their procedures for providing special education services (Meier, 2004, p. 53). Rather than offering special education services to a narrowly defined group of students with disabilities, school districts are now trying to provide interventions to all students who are struggling. In other words, they are trying to implement some version of Response to Intervention (RTI), sometimes referred to as multi-tiered systems of support (MTSS).

Response to Intervention (RTI) is an indirect descendent of the instructional reform movement typically attributed to the “Education for All Handicapped Children” Act of 1975. This act required schools to provide appropriate education and related services to students with disabilities (Public Law 94-142, 1975). The Act covered the education of children, ages three to 21, with the following disabilities: Autism,
Intellectual Disability (i.e., mental retardation), Deaf-blindness, Deafness, Emotional Disturbance, Hearing Impairment, Multiple Disabilities, Orthopedic Impairment, Other Health Impairment, Specific Learning Disability, Speech or Language Impairment, Traumatic Brain Injury, or Visual Impairment including Blindness (Public Law 108-446, 2004). As a precursor to the enactment of this legislation, Congress had determined that the instructional needs of many children with disabilities were not being met. They attributed this dereliction to the following circumstances: inadequate instructional services, the complete exclusion of students with some disabilities from the public school system, undiagnosed disabilities, and inadequate resources (Public Law 108-446, 2004; S.2781- Rosa’s Law, 2010).

The intention of the federal law was to ensure the provision of a free and appropriate public education to students with disabilities, thereby improving upon whatever services such students were already being provided (Public Law 108-446, 2004). According to some educational policy analysts, marginal improvements did result from the enactment of PL 94-142 (e.g. Fuchs, Mock, Morgan, & Young, 2003; Speece, Case, & Molloy, 2003; Wright, 2007).

Districts, however, found the law difficult to implement, and reports of their experiences with it suggested to some researchers and policy analysts that instructional services for students with disabilities still needed to be improved (Public Law 108-446, STAT. 2649, 2004; Fuchs, Fuchs, & Speece, 2002; Speece et al., 2003). Moreover, although the original legislation (enacted in 1975) has been amended and expanded (i.e., in Public Law 101-476 and Public Law 108-446), implementation difficulties persist and
arguably are even more challenging as a result of new provisions of the reauthorized law (Fuchs, et al., 2003; Fuchs et al., 2002; Vaughn & Fuchs, 2003).

Despite the challenges associated with the current legislation, it nevertheless requires school leaders to develop and sustain strategies for giving every student access to support. In theory, such support (e.g., the adoption of RTI or something like it) should enable school personnel to blend the line between general and special education because it enables the same curriculum accessible and available to all students (Deno, 2002; Marston, Muyskens, Lau, & Canter, 2003).

Response to Intervention (RTI) provides a framework for addressing the needs of struggling students, and it can be applied across districts in a systematic way. This framework is often represented as a pyramid consisting of three tiers in which each tier represents a more extensive form of intervention (National Research Center on Learning Disabilities, 2007). According to some commentators, RTI changes the approach to providing support from a reactive to a proactive one (Fuchs et al., 2002; Fuchs et al., 2003; Marston et al., 2003; McCook, 2007). As Fuchs and associates (2003, pg.159) noted, the process involves the following steps:

1. Students are provided with instruction that is typically thought to be effective.
2. Their progress is monitored.
3. Students who do not respond are given more instruction or a different kind of instruction.
4. Students’ progress is monitored again
5. Students who still do not respond are referred to special education, receive more intensive evaluations, and, if appropriate, begin to receive special education.

The steps in the model are specific and simple; and according to some researchers, use of the model has already played a significant role in breaking down the distinctions between special and general education (Fuchs et al., 2003; Fuchs et al., 2002; Marston et al., 2003; McCook, 2007; Wright, 2007). Nevertheless, not all schools and districts use the model equally well. As some authors note, RTI tends to be implemented most faithfully when districts make a strong commitment to its implementation. Commitment sufficient to make RTI work well appears to entail the professional development of teachers, allocation of adequate resources, and leadership directed toward sustaining the initiative (Deno, 2002; Marston et al., 2003).

Evidence indicates, however, that some school leaders may be unable or even unwilling to implement and sustain these systems of support (Denton, Vaughn, & Fletcher, 2003; Vaughn & Fuchs, 2003). The process is time-consuming, requires resources, and is dependent on the presence of highly trained and strongly committed teachers and school leaders (Denton et al., 2003; Vaughn & Fuchs, 2003).

The principal’s role.

According to many commentators, the principal is the single most influential educator in a school and holds ultimate responsibility for all the activities that take place within it (Leithwood, Louis, Anderson, & Wahstrom, 2004). Although teachers have the most obvious and immediate impact on the learning process, principals are, in theory,
positioned to ensure that effective instruction is provided to every student (Leithwood & Montgomery, 1986).

As leader of the school, the principal has two primary functions: providing direction and exercising influence (Leithwood et al., 2004). Whatever model of leadership the principal deploys, his or her leadership influences the staff’s interpretation of events, the objectives that the school pursues, participants’ motivation to achieve the school’s objectives, the development of cooperative relationships, and the ability to enlist outside support for the school (Yukl, 1994, p. 3). According to some writers, the principal is the gatekeeper of the school, and his or her role is of irrefutable importance (Colvin & Sugai, 2007). Principals have direct influence over the resources, staffing, communication, and organizational processes that determine what occurs or does not occur within their schools (Nanus, 1992). Some commentators note, however, that the autonomy given to principals is tied to expectations for principals to lead the creation, and implementation of learning programs for all students (Sage & Burrello, 1994).

Extant literature on school reform also affirms this view of the principals’ role: without the support and leadership of the principal, reform or change initiatives tend to falter (Colvin, Kame’enui, & Sugai, 1993; Fullan, 2002; Frase, 2005; Sugai, 2005). Studies conducted under the auspices of the Learning First Alliance (1997) and the Wallace Foundation (2004) identified the principal’s leadership as the dominant factor in the success of school change focused on the improvement of student learning (Colvin & Sugai, 2007; Leithwood et al., 2004; Togneri & Anderson, 2003). As these findings illustrate, research continues to demonstrate the positive association between the quality
of teaching (and ultimately learning) in schools and the quality of school leadership
(Murphy, 1990, p. 169).

Despite their important role, however, principals do not demonstrate equal
capacity or willingness to implement and sustain systems of support for students (Denton
et al., 2003; Vaughn & Fuchs, 2003). The current study took this perspective on
variability in principals’ willingness to sponsor RTI as a given, and it then sought to
examine the influence of certain conditions on principals’ (in this case, middle school
principals’) actions in support of RTI. This area of inquiry is relatively new, but it relates
to earlier research investigating variability in principals’ openness to other reforms.

Studies conducted by Praisner (2003), for example, suggested that principals’
training and experience influence their receptivity to inclusive models of instruction. This
research showed that principals with greater amounts of experience working as special
educators (or with special education programs) and working in inclusive settings were
more receptive than other principals to the practice of inclusion. Praisner (2003) also
found that principals had more favorable attitudes toward intervention and inclusion
when the content of their coursework in a principal preparation program “involved formal
training (workshops, courses) with at least 10% of the curriculum focused on topics of
special education” (p. 143). Other studies also indicated that experience in special
education predisposed principals to understand and support the use of interventions as
well as the needs of students with disabilities in an inclusion setting (Sage & Burrello,
In addition to their experience levels and instructional backgrounds, other conditions might also influence middle school principals’ receptivity to providing struggling students with appropriate interventions. Possible influences on principals’ receptivity to RTI are discussed in greater detail in the next section of the chapter.

**Possible Influences on Principals’ Receptivity to and Support for RTI**

Considering the complexity of the principalship and the wide range of attitudes and practices that exist among principals, identifying the variables that might influence a middle school principal’s receptivity to RTI is not likely to be a simple matter. As extant research indicates, leadership itself is influenced by an array of variables, some of which relate to the personal characteristics of leaders and some of which are contextual (Leithwood et al., 2004). Situational (or contextual) factors such as locale (i.e. urban, rural, suburban), community socio-economic status, and school resources may impact leadership (Heifetz, 1994). Needs of the organization and staff may also influence leadership (George, 2003; Heifetz, 1994). In addition to monetary resources, other issues related to resources (e.g., school size and school demographics) may also affect leadership.

Although these contextual factors appear to influence leadership in general, they may or may not have a significant influence on (or even a modest association with) principals’ receptivity to or support for RTI. Some previous studies, for example, suggest that, although external conditions may influence leadership practices, they may not have as strong an influence as personal characteristics and experiences on principals’ attitudes,
including their attitudes toward special education, interventions, and inclusion (Brownlee & Carrington, 2000; Praisner, 2003).

The primary aim of the current study, therefore, was to investigate personal characteristics that might be associated with middle school principals’ receptivity to RTI. The variables that the study considered were:

1. the length of principals’ teaching and administrative experience
2. their experience as general or special educators (or both)
3. their predominant instructional philosophy.

**Duration of principals’ teaching and administrative experience.**

Obviously, principals vary in terms of their backgrounds and instructional qualifications (DiPaola & Tschannen-Moran, 2003). Moreover, the already evident variability in levels of professional experience brought to the principalship has been increased through recent initiatives to recruit professionals from outside of education (DiPaola & Walther-Thomas, 2003). In particular, abbreviated mentorships and intensive training programs have been piloted in some places (e.g. Chicago) in an effort to recruit and train professionals to fill vacancies (Bertani, 2008; DiPaola & Walther-Thomas, 2003). As a result, some principals may have no teaching experience at all, while others may have decades of experience.

Length of experience, however, may not capture all that is meant by the term. After all, experience is a complex construct because, in its fullest sense, it does not just relate to one phenomenon (e.g., Kolb, 1984). Experience varies from individual to
individual; it shapes each person’s character, understanding of the world, and behavior. Even in a professional realm, one professional’s experiences differ from those of another. Nevertheless, in most cases, whatever the specifics of their experiences, longer tenure in a professional role typically leads to greater expertise (Shulman, 1986). In fact, the process of learning is often defined as the development of knowledge through experience (Hansen, 2000; Kolb, 1984). Many studies, in fact, draw on the insight that experts differ in both their perspectives and practices from novices (e.g., Shulman, 1986).

In the field of instructional administration, some studies suggest that knowledge gained through experience may influence the capacity of principals to lead efforts to promote the academic success of struggling students (DiPaola & Tschannen-Moran 2003; DiPaola & Walther-Thomas, 2003; Katsyannis, Conderman, & Franks, 1996). Of course, as suggested above, principals may vary in terms of the quality of the teaching and administrative experiences they have had and specific features of those experiences rather than just in terms of the length of those experience. Indeed, quality of experience more than length of experience may turn out to influence their leadership practices, receptivity to change, and other characteristics that might be relevant to their receptivity to and support for innovations such as RTI (DiaPaola, 2003; Leithwood et al, 2004; Praisner, 2003). Nevertheless, measuring qualitative differences in principals’ experiences would be extremely difficult and, therefore, beyond the scope of this study.

As a proxy measure, this study examined the extensiveness of middle school principals’ experience. In theory, the length of time a school leader has spent as a principal and as a teacher may increase or decrease his or her willingness to embrace
innovations such as RTI. Some evidence indicates that the more experience teachers and
administrators have with special education, the more positive they feel about their
involvement with special education and inclusive instruction (Praisner, 2003). Because
middle school principals with more experience in the field of education might also be
expected to have more experience with special education, it is reasonable to speculate
that these more seasoned educators would be more receptive to RTI than their less
experienced counterparts.

Nevertheless, there is also a correlation between experience and age, and some
research demonstrates that older people are less receptive than younger ones to change
(e.g., Bolman & Deal, 2003; Deal, 2007). As some researchers suggest, experience itself,
coupled with the aging process, may contribute to diminished openness to any innovation
or new idea (Bolman & Deal, 2003; Day, Sammons, Stobart, Kington, & Gu, 2007; Deal,
2007). In fact, receptivity to change has been studied in a broad range of professions and
contexts, and, across the board, studies indicate that older people have more difficulty
with the change process than their younger colleagues (Day et al., 2007; Deal, 2007).
Heifetz and Linsky (2002) refer to this resistance to change as the “thick skin of
experience,” which can be difficult to “sacrifice in the interest of progress” (p. 94).

Considering the somewhat contradictory evidence, the inclusion of experience as
an independent variable in a study investigating principals’ openness or resistance to RTI
seems warranted. Based on the logic supported by evidence about the association
between age and openness to change, the study might hypothesize that middle school
principals with more experience would be less receptive to RTI than middle school principals with a shorter duration of experience.

Nevertheless, as suggested above, experience with struggling students and with special education procedures might prepare middle school principals for handling the requirements of RTI. In addition, some evidence on the difference between expert and novice performance supports the claim that experience tends to promote flexibility and, possibly therefore, receptivity to change (Klecker & Loadman, 2000; Short & Jones, 1991).

A growing body of literature that seems to support insights from studies of expert and novice practitioners suggests that the *types* of experiences that principals have with special education rather than the length of their experiences influence their attitudes toward inclusion and intervention (Praisner, 2003; Villa et al, 1996; Wisniewski & Alper, 1994). Some of these studies show that principals who have had positive experiences with special education tend to have positive attitudes toward special education and inclusive instruction (Praisner, 2003). Other studies support the notion that principals’ positive experience with special education led to a more positive the attitude of the principal regarding inclusive education (Villa, Thousand, Meyers, & Nevin, 1994; Wisniewski & Alper, 1994). Villa and associates (1994), for example, surveyed 680 general and special education teachers and administrators’ to ascertain their views about inclusion. Results of the study indicated that educators’ experience, levels of collaboration, and the support they received contributed to favorable attitudes towards full inclusion.
As the discussion above reveals, the evidence about the influence of experience on receptivity is inconclusive. Therefore, the dissertation did not put forth a directional hypothesis about the association between middle school principals’ experience and their receptivity to RTI. Instead, it tested the null hypothesis.

**Principals’ preparation either as general or special educators.**

Field work such as internships, course work, and professional development provide educators with the knowledge base required for their work in schools (DiPaola & Tschannen-Moran 2003; DiPaola & Walther-Thomas, 2003; Katsyannis, Conderman, & Franks, 1996). Nevertheless, many educators have a limited amount of preparation interacting and supporting students with special needs. In a national survey of 52 administrators, for example, Valesky and Hirrh (1994) found that most states’ requirements for administrative licensure included only one introductory course in special education. Some research, however, has shown that training in special education makes an important contribution to principals’ (and teachers’) attitudes toward inclusive instructional practices (Praisner, 2003).

As the findings from this research imply, many principals may be inadequately prepared to function as the administrators of special education services. Findings from a study conducted by DiPaola and Tschannen-Moran (2003) also showed that principals saw knowledge about special education as a priority for their own learning and professional growth. How much knowledge principals might need is unclear, but DiPaola and Walther-Thomas (2003) suggested that principals need to have a rudimentary
knowledge of general education programming, special education programming, and ways to use this programming to help students with special needs.

The extant literature does indicate that knowledge about special education is positively associated with attitudes toward inclusion and the provision of special services to students with disabilities. Nevertheless, only a few studies have investigated this association. For this reason, the study did not posit a directional relationship between middle school principals’ preparation in special education content and their receptivity to RTI, but instead tested the null hypothesis.

**Principals’ instructional philosophy.**

Instructional philosophy, for the purposes of this study, was defined as principals' systems of belief about teaching and learning (Noddings, 1998). In this study, moreover, two broad philosophies were contrasted: teacher-centered and student-centered systems of belief (Callahan, 1962; Dewey, 1915, 1938; Noddings, 1998; Rogers, 1961). These perspectives about the connection between instructional aims and instructional methods have been thoroughly debated across the ages, and they continue to dominate contemporary discussions about instructional practice (Cuban, 1993, 2009). Under these two contrasting belief systems, the primary role of an educator is conceptualized differently.

An educator’s philosophy of instruction provides the foundation for decisions about instruction and the practices those decisions support (Cranton, 1998; Gailbraith, 1999; Noddings, 1998). The philosophy of instruction influences what will be taught, how it will be taught, how learning will be assessed, and how assessment results will be
interpreted (Kumar, 2006). Similarly, principals’ beliefs about teaching and learning influence the leadership exercised within their school (Levine & Lezotte, 1990).

The student-centered belief system is associated with progressive education and supports a non-directive teaching method that shifts the responsibility for learning from the instructor to the student (Dewey, 1938; DuFour, 1998; Jensen, 2000; Jensen, 2005; Rogers, 1961). With a student-centered approach, the instructional process is intended to engage learners in self-initiated, inquiry-based activities; and teachers’ primary role is to facilitate, rather than direct learning (Dewey, 1938; DuFour, 1998; Jensen, 2000, 2005; Rogers, 1961). Teachers give students the freedom to take ownership of the learning process, and they assess and refashion learning opportunities based on students’ interests. Students construct an understanding of new concepts through their own inquiry (Brown, 2003; Kohn, 2008).

Educators who write about the student-centered instructional philosophy identify its characteristics as (1) a focus on students, (2) the use of cooperative learning groups or pairs, (3) attention to students’ choice of what to study, (4) students’ engagement in evaluating their own learning, (5) use of active learning methods, and (6) engagement of students in decision-making (Dewey, 1938; DuFour, 1998; Jensen, 2000, 2005; Kohn, 2008; McCombs & Whisler, 1997). According to some educators, moreover, student-centered models also require teachers to devote a great deal of attention to the affective domains of learning (Tomlinson & McTighe, 2006). Personal relationships with students and efforts to discover students’ interests are critical practices enabling teachers to develop a curriculum that follows the child (Brown, 2003; Kohn, 2008, Phillips, 2007).
Furthermore, with student-centered instruction, the scope and sequence of the curriculum is responsive to the pace of learning and growth exhibited by the student. Teachers assess students’ skills and plan instruction based on their assessment of what students already know. The core assumption held by educators who subscribe to a student-centered philosophy is that all determinations about teaching and learning should begin with an understanding of the student and attentiveness to his or her interests and needs (Dewey, 1938; DuFour, 1998; Jensen, 2000; Jensen, 2005; Kohn, 2008; McCombs & Whisler, 1997).

In contrast to the student-centered approach, a teacher-centered philosophy of education is premised on the beliefs that (1) teachers are the primary transmitters of content and (2) students learn by receiving the content that teachers communicate (Berliner, 1988; Brown, 2003; McDonald, 2002). With teacher-centered instruction, the teacher is the expert. According to advocates of a teacher-centered approach, teachers should retain control over the content, scope, sequence, and pace of the curriculum (Cuban, 2009). In addition, teachers should take responsibility for assessing the degree to which students master the content that is delivered.

From the perspective of teacher-centered instruction, efficiency in the delivery of information is important (Berliner, 1988). Teachers convey information to learners primarily through lectures and recitation because these methods enable teachers to share a great deal of content with a large number of students in a relatively short amount of time (Berliner, 1988; Brown, 2003; McDonald, 2002).
Teacher-centered instructional practices represent the dominant mode of instruction in US schools (Cuban, 1993, 2009; Deschenes, Tyack, & Cuban, 2001). They continue to be fostered through recommendations for and adoption of scripted curricula, standardized testing, and state standards (Tomlinson, 2000). According to some commentators, the organization of schools tends to promote a teacher-centered approach—an approach, moreover, that demonstrates the influence of business in supporting a “factory model” of public schooling (see e.g., Callahan, 1962; Meier, Kohn et al, 2004).

Despite ample criticism of this perspective on teaching and learning, researchers continue to find that direct instruction, which is a teacher-centered approach, often improves achievement among some groups of students (National Reading Panel Report, 2000; Slavin et al, 2009; Turning Points, 2000). High-quality direct instruction, in fact, is an approach that continues to be endorsed by national groups (National Reading Panel Report, 2000; Turning Points, 2000). Numerous studies suggest that the sorts of scripted instructional sequences that accompany several of the Comprehensive School Reforms do result in improved achievement (e.g., Engelmann, Becker, Carnine, & Gersten, 1988; Slavin, Madden, Chambers, & Haxby, 2009). For example, Slavin and associates’ (2009) large-scale study of two million children receiving direct reading instruction as part of the Success for All reform package demonstrated the efficacy of this approach.

Some extant research shows that instructional philosophy influences teaching practice (Glickman, Gordon, & Ross-Gordan, 2005; Smith, 2008), and these findings suggest that instructional philosophy might also influence school leadership practice
(Levine & Lezotte, 1990). Moreover, if it does, in fact, turn out to be associated with leadership practice in general, instructional philosophy might also be associated with middle school principals’ receptivity to RTI. Middle school principals do, after all, pay attention to their schools’ instructional approaches and the instructional aims that those approaches support. Nevertheless, the association between principals’ instructional philosophy and their receptivity to reform in general, or RTI in particular has yet to be explored. For this reason, this study investigated the association between middle school principals’ instructional philosophies (student-centered or teacher-centered) and their receptivity to RTI.

Problem Statement

A limited body of research provides information about conditions that are associated with middle school principals’ receptivity to various innovations designed to help struggling students, such as special education and inclusion. Nevertheless, understanding the influence of such conditions is important in order to assure that innovations designed to help struggling students are effectively implemented in schools across the nation. Whereas some research has explored the influence of various conditions on principals’ receptivity to special education and inclusion, no research to date seems to have investigated the conditions influencing middle school principals’ receptivity to RTI. This study helped fill that gap by examining the extent to which four independent variables predict middle school principals’ receptivity to RTI. The independent variables of interest were (1) the length of middle school principals’ experience in the role of principal; (2) the length of middle school principals’ experience
as teachers before assuming the role of principal; (3) middle school principals’
experience as special educators, general educators, or both; and (4) middle school
principals’ instructional philosophies. This conceptualization of the research reflects the
logic model described below.

**Logic model.**

Receptivity relates to a person’s openness or willingness to entertain a new
perspective or a change in practice (Rosenberg & Turner, 1981, p. 643). The receptivity
of a principal towards any new perspective or recommendation for improved practice is
likely to be associated with certain personal characteristics. Every principal brings certain
characteristics, experiences, and skills to the role of school leader. A principal’s gender,
age, experience level, training, and belief system are all likely to influence his or her
receptivity to change. The change of interest in the current study is the adoption of
Response to Intervention (RTI). The study intends to investigate the association between
principals’ characteristics (their length of experience as a principal and as a teacher, their
experience as a general or special educator (or both), and their dominant instructional
philosophy) and their receptivity to RTI.

**Research Questions**

The research questions guiding this study are listed below:

1. To what extent does the combination of middle school principals’ length of
   experience (as a principal and as a teacher); their experience as general educators,
special educators, or both; and their instructional philosophy predict their
receptivity to RTI?
2. To what extent is the length of middle school principals’ teaching experience associated with their receptivity to RTI?

3. To what extent is the length of middle school principals’ administrative experience associated with their receptivity to RTI?

4. To what extent is the experience of middle school principals’ as general educators, special educators, or both associated with their receptivity to RTI?

5. To what extent is the instructional philosophy of middle school principals associated with their receptivity to RTI?

These research questions can also be formulated as null hypotheses to be tested by the statistical models that the study will employ. These hypotheses are:

- There will be no association between the length of middle school principals’ teaching experience before becoming administrators and their receptivity to RTI.
- There will be no association between the length of middle school principals’ administrative experience and their receptivity to RTI.
- There will be no association between middle school principals’ experience as general educators, special educators, or both and their receptivity to RTI.
- There will be no association between middle school principals’ instructional philosophies and their receptivity to RTI.

**Significance**

RTI is a large-scale reform that is influencing the national debate about instructional quality as well as guiding actions to improve instructional experiences and outcomes for struggling students (McCook, 2007). Some studies indicate that over the
course of the past five years more than two-thirds of school leaders in the United States have made efforts to adopt the RTI process (Hoover, Baca, Wexler-Love, & Saenz, 2008). A reform of this magnitude and importance is worthy of the attention of researchers and practitioners alike. At the early stages in the adoption of RTI, studies relating to conditions that may influence the implementation of this reform are particularly important to the profession (Graczyk, Domitrovich, Small, & Zins, 2006). Sanasoti and Noltemeyer (2008), moreover, indicate that “the current dearth of research examining factors that may promote or inhibit successful implementation of RTI,” is cause for concern because of the large scope and far reaching impact of this reform (p.3).

Understanding the conditions that influence middle grades principals’ receptivity to RTI is important to students, teachers, administrators, superintendents, and policy makers. These varied stakeholders have a vested interest in RTI and the impacts of this reform. The findings disclosed by the study help inform the perspectives and actions of these stakeholders as they address the processes associated with RTI (Sansosti & Noltemayer, 2008).

As noted previously, the principal plays a major role in determining the fate of a particular instructional reform. In fact, quite a number of authors agree with Sergiovanni and Starrat’s (2007, p. 214) claim, “as goes the principal, so goes the school.” Understanding the conditions, therefore, that influence middle school principals’ receptivity to a transformative initiative such as RTI is significant because of the impact that principals have on their schools—staff, students, and families (Smith, 2008). For example, if the study shows that middle school principals are less receptive to RTI than
researchers and policy makers would prefer, the study might justify a district’s or state’s investment in relevant professional development for principals (DiBacco-Tusinac, 2009).

A growing body of literature suggests that, in general, instructional reform efforts have been implemented incompletely or without sufficient fidelity (Berends, Bodily, & Kirby, 2002). Nevertheless, research also shows that full implementation and implementation fidelity are necessary in order for reforms to succeed (Callender, 2007; Datnow & Strinfield, 2000; Fullan, 2007; Hoover, Baca, Wexler-Love, & Saenz, 2008). Moreover, the success of the RTI model in particular requires consistency in the actions of principals and teachers (Gerber, 2005). At this time, however, there is very little known about what conditions might affect the ways middle school principals think about the implementation of RTI. Findings from this study are now able to provide insights to policy makers and state-level leaders regarding the variability in levels of implementation of RTI and the conditions influencing this variability (Hoover, Baca, Wexler-Love, & Saenz, 2008; Sansosti & Noletemeyer, 2008; Sarason, 1995).

**Theoretical Limitations**

This study had a number of limitations that might have reduced its potential for generating useful theory. First, the study explored only a small number of variables with potential to influence middle school principals’ receptivity to RTI. Nevertheless, previous research and introspection made it clear that there might be a large number of variables with potential to influence principals’ receptivity. This study, however, focused on just four such variables, a decision that inherently limited the explanatory power of the study.
Another limitation related to the use of survey research to gauge a phenomenon as elusive as receptivity to RTI. For example, middle school principals might hold more than one view about RTI—thinking perhaps that the approach is good, in theory, but doubting that it would be workable in practice. Under this circumstance, it might be difficult to determine which perspective represents “receptivity.”

Finally, the study was limited because, despite its apparent relevance to practice, its findings might actually have little bearing on what schools choose to do. For example, even though the study’s findings were relevant to the recruitment, employment, and professional development of principals, school districts might nevertheless continue to recruit, employ, and provide professional development to principals in accustomed ways. Ample evidence about the difficulty of change in instructional organizations, for example, points to the likelihood that well-entrenched approaches to school leadership often persist even when new empirical evidence supports changes of various sorts.

Similarly, this study’s findings about the influence that principals’ instructional philosophies have on their receptivity to RTI might not be sufficient to persuade principals to change their fundamental beliefs. Nor are the findings likely to alter some boards’ of education and superintendents’ tendency to focus on characteristics other than the instructional philosophies of principals when they make employment decisions.

Despite these limitations, I believe the study contributes to a richer understanding of leadership practice. Some boards of education, superintendents, and principals, moreover, may choose to alter their views about or approaches to the implementation of RTI as a result of what this study reports.
Summary

The research described in this study focused on the extent to which various conditions were associated with middle school principals’ receptivity to Response to Intervention (RTI), a recently mandated method of providing assistance to struggling students. As schools’ instructional leaders, principals play a critical role in implementing new initiatives, including special interventions such as RTI. According to many commentators, the principal is the most influential individual in a school and takes ultimate responsibility for all the activities that take place within it. Although teachers have the most obvious and immediate impact on the learning process, principals are, in theory, positioned to ensure that effective instruction is provided to every student.

Despite their important role, principals do not demonstrate equal capacity or willingness to implement and sustain systems of support for students. This study examined the influence of certain conditions on middle school principals’ willingness to support RTI. The variables considered were (1) the length of middle school principals’ teaching and administrative experience, (2) their experience as general or special educators (or both), and (3) their predominant instructional philosophy.

Limited research provides information about conditions that are associated with middle school principals’ receptivity to various innovations designed to help struggling students: special education, inclusion, and Response to Intervention (RTI). Nevertheless, understanding the influence of such conditions is important in order to assure that innovations designed to help struggling students are effectively implemented in schools across the nation. Whereas some research has explored the influence of various
conditions on principals’ receptivity to special education and inclusion, no research to date has investigated the conditions influencing middle school principals’ receptivity to RTI.
Chapter Two

This chapter reviews literature contextualizing a study of conditions that influence principals’ receptivity to the strategy known as Response to Intervention (RTI). Three bodies of literature are particularly relevant: descriptive studies of the history of RTI, quantitative and qualitative studies of educators’ attitudes toward RTI and related initiatives, and methodological literature pertaining to the measurement of receptivity and other associated constructs (e.g., attitudes).

The History of Response to Intervention

Response to Intervention is a recent initiative that comes from, and therefore resembles, earlier initiatives in special education. To explain how it relates to and how it differs from these earlier initiatives, this discussion briefly reviews the history of special education in the United States and then provides a more extensive treatment of the special education provision known as “least restrictive environment” (Public Law 94-142, 1975; Crockett & Kauffman, 1999).

Educators often begin accounts of the history of special education in the United States with discussions of the early use of tests to measure the intellectual development of children and adults (Lord, 1928; Osgood, 2008). Notably in 1916, U.S. psychologists began using Alfred Binet’s intelligence test to identify children with learning difficulties (or, as they were referred to at the time, “mentally defective” children). According to Osgood (2008), psychologists and educators used the Stanford-Binet test (i.e., the U.S. version of Binet’s test) to place students from regular schools into special schools for the “feeble minded.” Advocates for these students were outraged, but proponents of separate
education for handicapped children viewed the Stanford-Binet as an objective scientific method to ensure that “mentally defective” students were placed in appropriate settings for their own benefit and for the benefit of others (Lord, 1928; Osgood, 2008).

The period between 1910 and 1970 saw the expansion of segregated schools and classrooms for children with physical and mental impairments (Winzer, 1993). These schools and classrooms served students with disabilities only, keeping them isolated from nondisabled peers and typically offering them a program of study that emphasized life skills over academics (Osgood, 2008; Winzer, 1993).

Pressure to integrate students with disabilities into public schools and classrooms in the United States—rather than to keep them isolated from the mainstream—resulted from the efforts of grassroots advocacy groups whose influence dates back to the early 20th century (Osgood, 2008; Winzer, 1993). As concerned citizens became aware of the issues facing persons with disabilities, they increasingly urged policy makers to take action (Crockett & Kauffman, 1999; Katz, 1976). These efforts gained momentum in the 1960s and 1970s because of the ability of groups working on behalf of individuals with disabilities to build on the work of groups advocating for the civil rights of other protected classes of citizens.

In response to pressure from advocates, school districts began to offer less segregated education for students with disabilities (Katz, 1976). The efforts of large, urban school districts, including the Boston, Cleveland, Los Angeles, Chicago, and Detroit districts, began to be publicized in the late 1940s and early 1950s (Crockett & Kauffman, 1999; Dorn, Fuchs, & Fuches, 1996; Osgood, 2008). These city districts
provided special classrooms for students with disabilities, at least locating these classrooms within regular public school facilities rather than housing them in separate buildings (Osgood, 2008; Sutherland, 1937).

Despite these efforts in some urban districts, many school districts chose not to serve students with disabilities (Winzer, 1993). Even when they chose to serve some of these students, moreover, most districts did not use systematic procedures for identifying and making instructional plans for them (Winzer, 1993). Nor did they treat parents as partners in the process (Katz, 1976; Osgood, 2008).

By the 1950s, more information began to surface regarding the needs of students with disabilities, and a growing number of groups joined efforts to advocate on behalf of these children and their parents (Osgood, 1988). For example, the National Association for Retarded Children—which later evolved into the National Association for Retarded Citizens in 1973—became the most widely accepted voice advocating for children with disabilities (Katz, 1976). According to Osgood, this association was integral to the Disability Rights Movement of the 1970s. As Osgood noted, other advocacy groups were more radical, provoked confrontations, and called for a stronger response from the government.

**The first judicial and legislative remedies.**

The growing advocacy efforts helped prompt President John F. Kennedy, whose sister suffered from some type of mental impairment, to establish the President’s Panel on Mental Retardation in 1961 (Schalock, Baker, & Croser, 2002). The panel arrived at 95 recommendations, including a recommendation for more research on ways to prevent
mental retardation, a call for adequate protection of the civil rights of individuals with disabilities, the creation of community support programs, and the mandate to limit the practice of institutionalizing children and adults with disabilities (Schalock et al., 2002). The panel’s report eventually contributed to legislators’ inclusion of provisions for students with disabilities in the Elementary and Secondary Education Act (ESEA) of 1965 (Schalock et al., 2002; Winzer, 1993).

Although many of the ESEA’s provisions focused on impoverished children, some addressed the needs of students with disabilities (Anderson, Chitwood, & Hayden, 1997; Finn, Rotherham, & Hokanson, 2001). For example, the legislation created the Bureau of Education for the Handicapped—now called the Office of Special Education Programs (OSEP) (Anderson et al., 1997; Finn et al., 2001; Schalock et al., 2002). The Bureau of Education for the Handicapped then called for changes in public schools’ enrollment and treatment of students with disabilities. Even after the ESEA was enacted, public schools were still not mandated to accept students with disabilities, but the Bureau began making progress in encouraging more schools to accept these children (Schalock et al., 2002; Winzer, 1993).

Following the passage of the ESEA, advocates for special education were still not satisfied with the level of public school services for students with disabilities (Javier, 2004; Schalock et al., 2002). As a result, several advocacy groups initiated lawsuits to expand services for these children (Rothstein & Johnson, 2010). In 1972, the U.S. Supreme Court rendered a landmark decision by upholding the rulings of two lower courts (Rothstein & Johnson, 2010). In 1971, in Pennsylvania Association for Retarded
*Citizens (PARC) v. Pennsylvania*, a U.S. district court ruled that the state must provide full access to a compulsory education to exceptional children and youth up to age 21 (Martin, Martin, & Terman, 1996). In *Mills v. D.C. Board of Education* (1972), a U.S. district court ruled that it was unconstitutional for school districts to deny services to students with disabilities, even when they claimed to have inadequate resources. According to the relevant judicial rulings, the Fourteenth Amendment’s equal protection clause supported the requirement that students with disabilities receive services regardless of the resources available to schools (Martin et al., 1996). By 1973, these two cases—still cited as the foundations of special education law—had been upheld in more than 30 federal decisions (Martin et al., 1996).

During this same time period, advocates for returning Vietnam veterans were joining forces with advocates for children with disabilities (Martin et al., 1996). Their combined efforts resulted in the passage of the Rehabilitation Act of 1973 (Martin et al., 1996). Section 504 of the Rehabilitation Act of 1973 required that any organization, program, or service receiving federal dollars grant access to individuals with disabilities. The law protected persons with disabilities from discrimination (Martin et al., 1996; Rothstein & Johnson, 2010), but it did not provide funding or resources to enforce its mandates (Martin et al., 1996). Nevertheless, the law did give parents of children with disabilities the right to sue school districts in order to obtain appropriate services for their children (Martin et al., 1996; Rothstein & Johnson, 2010).
The least restrictive environment and PL 94-142.

A significant development in the 1970s came about in response to findings from research conducted by Evelyn Deno (1970). This research revealed the inadequacies of most schools’ services for students with special needs. It found that prevailing school practices resulted in the removal of many students with disabilities from general education classrooms and the placement of these students in more restrictive environments, such as self-contained special education classrooms. Deno’s research (1970, 1994) supported the view that schools had been negligent in meeting the needs of students with disabilities.

As a result of her research, Deno created and disseminated a model—the “Cascade of Services”—depicting a better, more student-centered approach for providing services to students with disabilities (Deno, 1970; Jimerson et al., 2007; MacMillan & Siperstein, 2001). The Cascade of Services (see Figure 1, below) provided a continuum of options, ranging from modifications of instruction in general education classrooms to intensive levels of support in segregated environments, such as a special school or a child’s own home (Deno, 1970). This framework, with its undergirding support for education in the least restrictive environment, stimulated discussion about what inclusive education might entail (Bender & Shores, 2007; Deno, 1970; 1994). Ultimately, Deno’s approach served as a catalyst for federal legislation with the aim of reforming public schools’ services to students with special needs (Jimerson et al., 2007).
Following closely on the heels of the Rehabilitation Act of 1973 and reflecting Deno’s principle of education in the least restrictive environment was the Education of All Handicapped Children Act (Public Law 94-142), which Congress passed in 1975 to ensure that all students receive equal and appropriate education, regardless of their abilities and special needs (Brown-Chidsey, 2007). The legislation specified what was meant by a “Free and Appropriate Education” (FAPE), and it set forth eligibility requirements for placement in a special education program. In addition, it established a set of procedural safeguards to protect the rights of students who might be suspected of having disabilities as well as protecting their parents or legal guardians. According to Wright (2006), PL 94-142 outlined a system requiring public schools to identify, test for eligibility, and provide special education services to students with various disabilities.

Two other provisions of PL 94-142 were significant in changing school practices: the requirement that schools develop Individualized Education Plans (IEPs) for students
who receive special education services and the requirement that such students be educated in the least restrictive environment. An IEP is a document that is developed at least annually by a team consisting of a student’s parent(s) and teacher(s) as well as one or more representatives of the school district. The IEP team uses relevant assessment data to determine appropriate instructional goals and objectives for the student and reaches agreement about how the student’s needs might best be met within the least restrictive environment (LRE).

The LRE provision of PL 94-142 is important because it keeps students from being removed arbitrarily from general education classrooms where they can learn the same academic curriculum as other students and interact with age-appropriate peers. In short, the LRE provision requires schools to justify any decisions that result in the part- or full-time removal of a student from the general education curriculum. When the removal of a student is recommended by an IEP team, the team must show why this decision is in the student’s best interests.

The Individuals with Disabilities Act (IDEA) and the Individuals with Disabilities Education Improvement Act (IDEIA).

Public Law 105-17 known as the “Individuals with Disabilities Act” (IDEA) replaced PL 94-142 in 1990. This law extended the provisions and requirements governing the free and appropriate education of students with disabilities. The law also added new requirements including several relating to the responsibilities of public school districts: (1) the requirement to identify children with disabilities in the age range between birth and 5 years, (2) the expansion of the age range of students with disabilities
that school districts must serve—broadening the range to include students from the ages of 3 to 21, and (3) the requirement to provide students with disabilities with an expanded set of vocational education options (Individuals with Disabilities Act Public Law 105-17).

In 2004, Congress again reauthorized PL 94-142 by passing PL 108-446, the “Individuals with Disabilities Education Improvement Act” (IDEIA). Just as IDEA represented an expansion of PL 94-142, so too did IDEIA represent an expansion of IDEA. In particular, the reauthorization linked provisions of the law governing special education with changes required by the reauthorized Instructional and Secondary Education Act—a reauthorization known as “No Child Left Behind” (NCLB). Because NCLB included requirements that all teachers be “highly qualified” to teach the academic subjects they were assigned to teach, IDEIA required special education teachers to become highly qualified in academic subjects as well. In alignment with NCLB, IDEIA also included provisions for the collaborative functioning of IEP teams and for the inclusion of students with disabilities in the assessment programs that were required as part of each state’s accountability system (Individuals with Disabilities Act, 2004). In addition to its other provisions, IDEIA (in accord with NCLB) required districts to adopt and use evidence-based practices for instruction and assessment of students with disabilities (Brown-Chidsey & Steele, 2005; Individuals with Disabilities Act, 2004; No Child Left Behind Act, 2001). According to some authors, the most important provision of IDEIA was its elimination of the process (discrepancy model) used in the
identification of students with learning disabilities (Bender & Shores, 2008; Wright, 2006).

With their focus on evidence-based instructional practices, IDEIA and NCLB legitimized the decision by some school districts to implement Response to Intervention models (Brown-Chidsey & Steele, 2005; Fuchs & Fuchs, 2001). Furthermore, in 2006, the Office of Special Education in the U.S. Department of Education disseminated regulations clarifying that RTI (See Figure 2, below) was an acceptable model to adopt as a way to meet the NCLB and IDEIA requirement for evidence-based interventions (Bender & Shores, 2007, p. 22). Despite endorsement of the model, the regulations did not prescribe one particular way for states, districts, or schools to implement the model (CFR, 300, 2006).

![Figure 2. Current Response to Intervention Pyramid of Services (Adapted from Bender & Shores, 2007, p. 22).]
The implementation of Response to Intervention (RTI).

The Response to Intervention (RTI) framework details a process of systemic intervention and assessment that results in a productive match between a student’s instructional needs and appropriate evidence-based interventions (Brown-Chidsey & Steege, 2005; Hover, 2008; Jimerson et al., 2007). As a student’s needs increase, decrease, or change, the model requires educators to make appropriate changes in the duration and/or frequency of the intervention. The model also entails continual monitoring of each student’s performance as a basis for making decisions about the intensity and/or duration of an intervention or set of interventions (Bender & Shores, 2007; Hoover et al., 2008).

Despite its endorsement by the U.S. Department of Education, RTI has been adopted to greater and lesser degrees in different states and localities. According to surveys investigating its implementation, states have mostly supported RTI at least to the extent of providing training that draws attention to its benefits. The National Implementation of Response to Intervention Research Summary (Hoover et al., 2008), for example, found that 90% of the states in the US are offering RTI training to educators (Hoover et al., 2008).

Even considering these efforts, Hoover and associates claimed that many states are still in the beginning stages of implementation. They also concluded that additional research is needed in order to determine how RTI is being implemented and why its
implementation has stalled. Specifically, the team called for research on the following issues related to the implementation of RTI:

- states’ operational definitions of RTI, including their definitions of educators’ roles in implementing RTI;
- variations within and across states in the implementation of RTI;
- barriers to implementation of RTI;
- statewide models and the impact of these models on the implementation of RTI;
- the use of the framework for early identification of students with special needs; and
- policy implications of RTI. (p. 12)

In 2010, an even more recent study of the implementation of RTI—a collaboration among the Council of Administrators of Special Education, the National Association of School Administrators, and the National Association of State Directors of Special Education—used a web-based survey to determine the extent of RTI adoption in K-12 schools. This survey, the most current iteration of an annual survey that was first administered in 2007, gathered information regarding the adoption of RTI and barriers to its implementation, the scope of the implementation of RTI, and resources needed for the implementation of RTI. Comparison of findings from this annual survey showed that over time districts have been moving from the planning to the implementation phase of RTI adoption (See Figure 3).
As of 2010, the survey showed that approximately 61% of districts were either planning for or in the process of implementing RTI (Council of Special Educators et al., 2010). According to the authors of the report, this percentage represents a sizable increase from the 54% reported in 2009.

The survey also showed that elementary schools had the highest rates of implementation, with 90% of schools reporting that they used RTI in reading and 59% reporting that they used RTI in math (Council of Special Educators et al., 2010). Middle and high schools reported significantly lower rates of implementation: 67% in reading and 48% in math for middle schools and 43% in reading and 34% in math for high schools (Council of Special Educators et al., 2010; See Figure 4).
Overall, the survey research suggests that schools and districts are continuing to plan for, initiate, and implement the RTI framework (Council of Special Educators et al., 2010; Hoover et al., 2008). As Wright (2007) noted, however, implementation of RTI is a work in progress.

**Summary of the discussion of the lineage of RTI.**

This section of the literature review examined the connection between RTI and earlier efforts to provide students with disabilities in environments that were inclusive (i.e. least restrictive). It provided a brief history of special education in the United States, concentrating on evolving perspectives and the judicial and legislative decisions reflecting those perspectives. In the course of this historical presentation, discussion touched on the conceptual similarity between Deno’s “Cascade of Services” and RTI. Following its historical contextualization of RTI, this section of the chapter also provided
a review of literature concerning the extent to which and ways in which RTI has been implemented in the various states in the United States and at various grade levels.

**Attitudes of Educators toward the Inclusion of Special-Education Students**

In response to requirements of the IDEA, schools in local districts must make use of instructional arrangements that ensure that students with disabilities are served in the least restrictive environment (LRE; U.S. Department of Education, 2004). Moreover, as noted above, the LRE represents the most normalized learning environment for a student with disabilities. Whereas, overall, the IDEA treats the general education classroom as the least restrictive environment, its provisions acknowledge that some students do not benefit from full-time inclusion in this environment. According to the IDEA, teams that develop Individualized Education Plans (IEP) need to determine when the general education classroom is not the least restrictive environment for a particular student. Some instructional researchers have found that districts tend to choose one of two approaches to LRE—mainstreaming and inclusion (Jobe, Rust, & Brissie, 1996).

**Old studies of mainstreaming: the start of inclusion.**

Mainstreaming occurs when a child is placed in a resource room for small-group or individual instruction but also is included in, or mainstreamed into, the regular classroom for a portion of the day (Jobe et al., 1996; Stainback & Stainback, 1988). With this model, the resource room teacher is primarily responsible for the mainstreamed students. According to Forest and Lusthaus (1989), mainstreaming is more restrictive than inclusion; nevertheless, both approaches form part of a continuum such as the one popularized by Deno (1970).
According to Jobe and associates (1996), inclusion models, in contrast to mainstreaming models, sometimes include all students with disabilities in the general education program full-time and sometimes provide more restrictive alternatives for the small number of students who have the most severe disabilities (see also Idol, 2006). With inclusion models, special education teachers, or special education support staff, and general education teachers share responsibilities for instruction, which takes place primarily in general education classrooms.

Despite their differences,¹ both models of service enable students with disabilities to access at least some of their instruction in the general education classroom setting. As such, both models are contingent on the collaboration and cooperation between special and general educators. In addition, the success or failure of each model was significantly affected by the attitude of teachers and administrators (Parrish, Nunn, & Hattup, 1982; Stoler, 1992).

Research on educators’ attitudes toward mainstreaming and/or inclusion, however, is limited. To understand the relevant research literature, it is helpful to characterize it in terms of three fundamental ideas: the nature of educators’ attitudes toward mainstreaming and/or inclusion, the predictors of such attitudes, and the consequences of such attitudes.

¹ Despite differences in the two models, much of the extant research presents inclusion and mainstreaming as interchangeable descriptors of special education services, often referring to both as “integration” (Amrein-Beardsley, Berliner, & Rideau, 2010; Avramidis & Norwich, 2002).
The nature of educators’ attitudes toward inclusion.

Several studies have explored educators’ attitudes toward integration of students with disabilities into general education classrooms (i.e., mainstreaming and inclusion). To summarize the early studies of such attitudes, Scruggs and Mastopieri (1996) used the quantitative technique known as meta-analysis. Through this statistical approach, these researchers summarized findings from 28 studies that had been conducted between 1958 and 1995 in the United States, Wales, Australia, and Canada. The researchers provided a synoptic view of the studies’ results by addressing the following research questions:

- Do teachers support the practice of including students with disabilities in general education classes?
- Are general education teachers willing to teach students with disabilities?
- Do special and general education students benefit from inclusion and/or mainstreaming?
- Does the practicing of including students with disabilities in general education classrooms have negative impacts?
- Do regular education teachers have enough time to practice inclusion?
- Do teachers receive enough training about inclusion?
- Do teachers receive adequate resources for implementing inclusion?

Their meta-analysis yielded findings characterizing consistent trends across the 28 studies. Notably, the meta-analysis showed that, in general, teachers expressed support for mainstreaming and inclusion and indicated their willingness to include students with
disabilities in their classrooms. Nevertheless, a substantial number of respondents (nearly 40%) reported that students with disabilities could negatively affect instructional processes and outcomes in general education classrooms.

Furthermore, only small proportions of teachers reported having sufficient resources to support their efforts to provide inclusive education. For example, slightly fewer than 28% of the teachers indicated that they had adequate time for the instructional planning necessary for using inclusion effectively. Similarly, only about 29% claimed that they had received adequate training to prepare them for integrating students with disabilities. Finally, a high percentage of teachers believed that additional resources would be needed in order for mainstreaming and/or inclusion to work effectively. Seventy-one percent expressed the view that class sizes should be reduced to support inclusionary models, and almost 77% expressed the view that support personnel should be employed for general education classrooms serving students with disabilities (Scruggs & Mastropieri, 1996).

In the same year, Villa, Thousand, Meyers, and Nevin (1996) conducted a large-scale survey of general and special education teachers to gauge their attitudes toward inclusive education. The study was guided by the following research questions:

• What is the relationship between attitude and a teacher’s role as a special or general education teacher?

• What is the relationship between background/experiences and attitude of general education teachers and principals toward students with disabilities in the classroom?
• What is the relationship between background/experiences and attitudes of special education teachers and administrators? (p. 31)

The researchers administered a 16-item questionnaire, the Heterogeneous Education Teacher Survey (HETS) and a second questionnaire, the Regular Education Initiative Teacher Survey-Revised (REITS-R) to 680 teachers in 34 schools in New York, Illinois, Arizona, Vermont, Michigan, as well as in Ontario, Canada. The study replicated an earlier study that had been conducted by Semmel, Abernathy, Butera, and Lesar (1991), which had found that both general and special education teachers tended to be unsupportive of inclusion models, believing instead that pull-out models were the most appropriate placement option for students with disabilities. Villa and associates’ (1996) data, however, supported different conclusions, namely that general and special education teachers preferred to work together, felt more competent when they did so, and did not worry about potential challenges to the achievement of general education students in classrooms in which special education students were integrated. While Villa and associates noted that their findings contradicted those of the earlier study, they attributed the difference to the fact that inclusion had become a much more common practice in the five years between the two studies.

Also using survey methods, Daane, Beirne-Smith, and Latham (2000) studied administrators’ and teachers’ perceptions of inclusion in a school district of 8,000 students. They distributed a questionnaire to 348 general and special education teachers and 15 administrators to elicit information about four areas of practice: collaborative efforts, instruction of students with disabilities, teachers’ preparation for working with
students with disabilities, and perceptions of the achievement outcomes obtained by
students with disabilities. The study found that collaboration among administrators,
special education teachers, and general education teachers was occurring as a part of the
IEP planning process and that general and special educators were often co-teaching in
inclusive settings. Nevertheless, the teachers unanimously reported that students with
disabilities should be removed from general education classrooms for at least a part of
their instruction—a perspective likely revealing their somewhat negative attitudes toward
inclusion. By contrast, the principals overwhelmingly saw the general classroom as the
best placement for students with disabilities but acknowledged the need for some type of
pull-out programming. Perhaps this finding showed that the principals had more positive
attitudes than the teachers toward inclusion, or perhaps it simply reflected the fact that
principals were further away from the realities of the classroom than teachers were.

The findings of this study suggested that, despite the somewhat less positive
attitudes of the general education teachers, instructional personnel in the district did
support inclusion in various ways. Even the educators who had favorable attitudes toward
inclusion, however, acknowledged that this practice required extra work and relied on the
collaborative capabilities of general and special educators. Despite its contribution to a
deeper understanding of educators’ levels of support for inclusion, the study’s design
imposed significant limitations, the most serious of which was the fact that it was
conducted in only one district. Because of this limitation, the research findings cannot be
generalized to educators in other districts.
Idol’s (2006) study of inclusion in four elementary and four secondary schools had as one of its aims an investigation of the school staffs’ perceptions of various approaches to inclusion. To address this aim as well as the other aims of the study, Idol conducted one-on-one interviews with more than 50% of the staff members of each school—a total of 120 staff members. Overall he found that the principals and general classroom teachers had positive attitudes towards inclusion but favored models that allowed special education staff to accompany students with disabilities into general education classrooms. The teachers favored the practice of using additional staff to work directly with special education students in general education classrooms as well as the continued use of resource rooms or pull-out spaces for providing additional services. Similar to respondents in Daane and associates’ (2000) study, interviewees in Idol’s study indicated that more resources and more extensive professional development would be likely to improve the effectiveness of inclusion models. Also, as was the case with Daane and associates’ study, the relatively small and localized sample in Idol’s study limited the generalizability of its findings. Furthermore, with interviews of the sort that he conducted, the possibility of social desirability bias might also have compromised the accuracy of findings.

In a 2007 investigation, Cook, Cameron, and Tankersley explored inclusion teachers’ attitudes toward students with disabilities. The study involved a survey of 50 teachers whose assignments entailed working with a total of 199 nondisabled students and 156 students with disabilities. The survey elicited responses relating to four attitudes that teachers typically hold toward their students: attachment, concern, indifference, and
rejection (see e.g., Silberman, 1969). Unlike the two studies discussed above, Cook and associates’ study surfaced negative attitudes toward students with learning and/or behavioral difficulties. Teachers’ responses tended to show that their attitudes toward these students were high in terms of rejection and low in terms of attachment. The fact that the study was able to elicit negative attitudes suggests that its methods did not contribute to social desirability bias. Nevertheless, because it took place in one setting only, its findings, like those of Idol’s and Daane and associates’ studies, cannot be generalized.

Overall, findings about educators’ attitudes towards inclusion and mainstreaming are mixed and therefore inconclusive. Some studies suggest that their attitudes are primarily positive, some show that their attitudes are mixed, and some seem to indicate that their attitudes are primarily negative. One explanation of the inconclusiveness of the findings relates to the study limitations discussed throughout this section. Another is that certain conditions—either the personal experiences of educators or the circumstances confronting them at their schools—influence their attitudes. Studies of such potential influences, often positioned in correlational studies as “predictors” so as not to overstate the explanatory power of findings about associations, are the next topic of discussion in this chapter.

**Predictors of educators’ attitudes.**

Some research has investigated variables that predict (and therefore perhaps may influence) educators’ attitudes towards inclusion and/or mainstreaming (e.g., Cochran, 1997). In most such studies the predictor variables include experience, initial teacher
preparation, administrative support, professional development, collaboration, resources, and staffing levels (Idol, 2006; Stainback & Stainback, 1988; Villa et al., 1996). Findings from these studies have shown that two sets of variables are most salient: variables relating to training and experience and variables relating to support (Hirth & Valesky, 1991; Idol, 2006; Kern, 2006; Leatherman & Niemeyer, 2005). The discussion below provides a chronological description of illustrative studies of predictors of educators’ attitudes toward mainstreaming and/or inclusion—a line of research that began to take shape in the early 1990s.

Although Rodden-Nord, Shinn, and Good’s (1992) study did not examine the association between training and attitudes per se, its findings were pertinent to that issue because they showed that teachers’ attitudes toward mainstreaming and/or inclusion did not seem to be fixed, but rather appeared to be amenable to change. These researchers looked at how information about student performance affected the attitudes of general classroom teachers toward the integration of students with disabilities. The participants in the study were 26 general education teachers who provided reading instruction to students with learning disabilities in grades 1-5 in five schools. In a pre-assessment questionnaire, teachers identified students with disabilities as either potential or unlikely candidates for reintegration into general education reading groups. They also responded to the Social Behavior Survival Scale (SBS) (Walker & Rankin, 1983) to record their expectations for the students’ social and academic behavior. Four weeks later, these same teachers reviewed student performance data from curriculum-based measures and reading achievement tests. After reviewing the data, they completed a post-assessment
questionnaire about their attitudes. The pre-assessment results showed that prior to seeing students’ achievement scores, the teachers were negative or neutral in their attitudes toward reintegrating students with disabilities into their classrooms; however, after they had reviewed the student achievement data, their attitudes were more positive. Although this study’s findings were encouraging, they did not actually demonstrate how training might alter teachers’ attitudes.

Other studies took a more direct approach by actually providing training and evaluating its impact. Dickens-Smith (1995), for example, studied the impact of training on the attitudes of general and special education teachers. The study sampled 100 special education and 100 general classroom teachers who had received professional development preparing them for inclusion. Questionnaires explored their attitudes toward inclusion before and after training activities. Dickens-Smith discovered that, without exception, the attitudes of teachers (both special and general education) about inclusion unanimously increased after participating in professional development activities. In particular, the greatest change in perspective concerned the need for all educators—teachers and administrators—to be involved in providing and supporting inclusion.

Using a different approach, Livingston, Reed, and Good (2001) surveyed 68 principals in southern rural Georgia to learn about their attitudes toward various placement options for students with severe learning disabilities. The principals classified students on a continuum from those requiring education in the most restrictive (i.e., residential) environment to those requiring education in the least restrictive (i.e., general classroom) environments to reveal their perceptions of the severity of the students’
disabilities. Fewer than 15% of the principals recommended including all of the students with severe disabilities in general education classrooms, and approximately half recommended placing them in self-contained classrooms. Experience was the most significant factor in predicting the principals’ attitudes toward inclusion: those with previous experience working with students with severe disabilities were more open to placing them in less restrictive settings.

In 2003, Praisner explored the association between training and experience and the influence on the attitudes of principals toward inclusion. His survey of 408 Pennsylvania elementary school principals entailed the administration of The Principals Inclusion Survey (PIS), which consisted of 28 questions eliciting information about principals’ characteristics, their training and experience, their attitudes, and the placement options they saw as preferable for students with disabilities. Only about one in five principals reported a positive attitude towards inclusion, and most were uncertain. Nevertheless, data analysis showed that the principals’ past experiences and relevant training were positively correlated with their attitudes.

Focusing on teachers and using qualitative methods, Leatherman and Niemeyer (2005) studied the factors that influenced the classroom practices of two pre-service and two in-service early elementary teachers. The researchers observed the teachers over a six-week period and used open-ended interviews in an effort to identify possible factors influencing their attitudes towards inclusion. The researchers determined that the teachers’ attitudes toward inclusion had been influenced by their previous experiences with students with disabilities and with inclusive classrooms: the teachers reporting
successful previous experiences had more positive attitudes. The study also suggested that teachers’ attitudes were contingent on conditions supportive of their work, including administrative encouragement, professional development, collaboration, and resources (see also Idol, 2006; Stainback & Stainback, 1988; Villa et al., 1996). With such a small sample size, however, these finding were simply illustrative—but they did correspond to the findings of other related studies.

In 2006, Kern surveyed 77 special education and general education teachers’ regarding their attitudes towards inclusion. The study was limited to an urban school district, but the sample consisted of more than one-third of all K-12 teachers in that district. The study sought to determine if teachers’ attitudes varied based on their gender, age, education, grade level taught, or special education courses taken. Findings showed a negative relationship between teachers’ age and their attitudes. Younger teachers (especially those under the age of 36) had more positive attitudes toward inclusion. Professional training and experience working with students with disabilities were also found to influence teachers’ attitudes as did administrator support and the availability of resources.

Also using a survey, Ross-Hill (2009) examined the variability of teachers’ attitudes towards inclusion. In this study, 73 teachers from three elementary and secondary schools completed the Scale of Teachers’ Attitudes Towards inclusive Classrooms (STATIC), which contained 31 questions focusing on the benefits and costs associated with inclusion (Cochran, 1997; Ross-Hill, 2009). Findings indicated that the
teachers, in general, had positive attitudes toward inclusion. Moreover, the attitudes of elementary and secondary teachers did not differ significantly.

In summary, these studies showed that (1) positive experiences with special education students and with inclusion tended to be associated with educators’ positive attitudes toward this approach, (2) professional preparation for working with students with disabilities also appeared to be associated with positive attitudes, (3) educators tended to attribute a more positive outlook toward inclusion to greater levels of collegial and administrative support (see also Osgood, 2007; Rodriguez et al., 2012), and (4) educators saw the provision of adequate resources as a prerequisite for positive attitudes toward inclusion. Although these findings were consistent across most of the studies, they need to be regarded cautiously. Notably, these studies all confronted similar methodological limitations. First, almost all of them employed a self-reporting process. Because of respondents’ unintentional lapses in memory or intentional efforts to make themselves look good in the eyes of researchers (i.e., social desirability bias), self-report data are often suspect (Babbie, 1990; Converse & Presser, 1986). Second, the studies tended to be conducted with relatively small or localized samples. As a consequence, their findings could not be generalized to educators in schools or districts other than those investigated in each study.

Outcomes of educator attitudes toward mainstreaming, and/or inclusion.

The preceding sections have presented research on the nature of educators’ attitudes toward mainstreaming and/or inclusion as well as on predictors of their attitudes. This section now turns attention to research on the outcomes of these attitudes.
Attitudes influence behaviors.

As a number of studies have shown, teachers’ attitudes influence their behaviors, and these behaviors in turn influence student outcomes. Among the related studies, Silberman’s (1969) early research provided support for this sequence of associations. Noting that a teacher’s attitude toward a child could be assessed through observable behaviors, both the teacher’s behaviors and the students’, Silberman observed and interviewed teachers and students. What he was looking for was evidence of one of four dispositions toward the child: attachment, concern, indifference, or rejection. Silberman observed that teachers who demonstrated concern for students spent more time with and gave more care to these students. And he observed that teachers who expressed indifference towards students demonstrated less contact with these students. Data from student interviews asking about their contact with teachers tended to confirm the data obtained through the observations of teacher behavior.

Silberman’s findings were significant because they provided evidence that teachers communicate their attitudes to students through their behaviors toward them and that students read these behaviors accurately. Further, the study showed that children’s experiences in the classroom were significantly influenced by teachers’ actions toward them. Not only did teachers’ actions affect students directly, their actions also set the stage for how peers perceived and treated them (Silberman, 1969).

Good and Brophy (1972) broadened the scope of Silberman’s research by targeting different grade levels and different groups of students. These researchers observed for 40 hours each nine heterogeneous classes of first-grade students, totaling
270 students. As was the case with Silberman’s work, the research questions pertained to teachers’ attachment to, concern for, indifference to, and rejection of students whose achievement levels differed. The researchers found that teachers typically expressed attachment to the high-achieving students, indifference to the moderate-achieving students, and rejection of or concern for the low-achieving students. This research supported Silberman’s findings that teachers’ attitudes shape their actions towards students. However, Good and Brophy’s study also found that the teachers’ differential behavior was apparent with respect to all four dispositions, not just with respect to concern and indifference.

In 1985, Zigmond, Levin, and Laurie explored how teachers’ attitudes and student behaviors could influence the performance of students with learning disabilities in 12 mainstreamed high school settings. In response to a request from the researchers, 429 teachers responded to an open-ended survey assessing their attitudes toward students with learning disabilities and the inclusion of these students in general classrooms. Additionally, the researchers conducted interviews with two randomly selected teachers from each high school—a total of 24 teachers—regarding accommodations, processes, practices, and student information. They also gathered and analyzed the grades of students with learning disabilities in the 12 high schools. Finally, they cross-referenced every course the students with disabilities had failed with student attendance data. The researchers tried to determine if teacher attitudes, instructional practices, or student behaviors had contributed to the students’ failures in general education classrooms. Both
the survey results and interviews indicated that the teachers viewed students with learning disabilities as extra burdens and as subpar achievers.

Despite teachers’ perspectives about the students and the burdens associated with teaching them, the researchers discovered that the students did not actually turn out to be burdens in the sense of taking up more of the teachers’ time. Notably, teachers did very little to accommodate these students, neither planning specifically for their instruction nor differentiating instruction for them. Further, the teachers reported that the only accommodation they made was in their grading practices—establishing lower standards for passing and giving credit for student effort. Their responses suggested to the researchers that the teachers’ negative attitudes toward the students and their expectations that the children would achieve poorly relieved them of the need to plan for or accommodate these students. Other findings from the study also supported similar conclusions: 75% of the students with disabilities were passing their mainstreamed high school courses; of the 25% who were failing, lack of attendance was the major contributing factor. Although this research provided insight into the outcomes of teachers’ attitudes on the experience, adjustment, and achievement of students with learning disabilities in an inclusion model, the researchers recommended that additional studies be conducted.

In 1997, Clark examined how teachers’ awareness of students’ learning disabilities could influence their responses to students. Of particular interest to the researcher were teachers’ use of reward and punishment, their attributions about students’ effort and ability, their feelings of anger and pity, and their expectations regarding
students’ failure or success. For this study, which included 97 elementary school teachers, Clark presented participants with eight different learning scenarios describing situations in which a male student failed a test. After viewing each scenario, teachers rated their reactions with respect to how likely they were to give feedback, feel anger, feel pain, and anticipate student failure. Clark analyzed the responses based on ability, effort, and disability status of the students portrayed in each of the scenarios to identify relevant associations. The results supported prior research showing that knowledge of a student’s learning disability tended to predispose his or her teachers to expect the student to fail. Accordingly, teachers tended to reward students with disabilities more often than they rewarded typically developing students. And they felt pity, as opposed to anger, in response to the failure of a student with a learning disability. Most significantly, the teachers expected students with learning disabilities to fail—not for lack of effort but because the disability was out of both the teacher’s and student’s control. Because the students with disabilities were supposedly destined to fail, the teachers felt sorry for them. By contrast, teachers reported feeling anger when students with high ability seemed to be exerting too little effort. The teachers gave these students more severe punishments and showed little sympathy toward them because they had expected them not to fail. In Clark’s view, the findings demonstrated that teachers tend to value students’ effort, regardless of ability. Nevertheless, for students with disabilities, teachers often expect such effort to result in failure.

In a mixed method study, Short and Martin (2005) investigated the attitudes of teachers toward the inclusion of special education students in a rural K-12 high school;
20 teachers and 79 special education and general education students participated in observations and interviews and completed a survey. The study supported several relevant insights. First, according to the researchers, teachers and students were not involved sufficiently in decisions about inclusion. Second, special education teachers and students did not always feel fully accepted in general education classrooms. General classroom teachers’ negative attitudes and limited experience relating to special education students and staff appeared to interfere with the effectiveness of inclusion. Because of the unreceptive attitudes of many general education teachers, special education teachers reported that they took steps to ensure that their students were placed for inclusion services in the classrooms of the most positive and caring teachers. Finally, teachers reported that small class sizes helped foster positive attitudes and more efficient implementation of inclusion. As this research revealed, attitudes—both positive and negative—seem to influence the implementation and ultimate success of inclusion (Short & Martin, 2005). Although this finding mirrored what other studies have found, its generalizability was limited because of the small sample size and case-study design.

Cook and Cameron (2010) investigated teachers’ attitudes of concern and rejection towards students with disabilities who were included in general education classrooms. Their study explored teachers’ attitudes and interactions with students in six elementary and three middle schools. The researchers coded teacher and student interactions as social, functional, behavioral, academic, or procedural. Teachers were asked to nominate and group students with disabilities based on student needs. The researchers used the Basic Scale of Disability Severity (BSDS) to label the different
student groups as having mild or severe disabilities. The teachers were then asked to respond to two statements: I want to give all my attention to this child because I am concerned. I would be relieved if this child was removed from my class.

Cook and Cameron analyzed the data to look for associations between student disability labels, the most prevalent type of teacher-student interactions, and teachers’ self-reported stance of concern or rejection. Data analysis revealed the following significant associations:

1. Concern ratings correlated positively with both academic and social interactions.
2. Rejection ratings correlated positively with behavioral interactions.

Teachers responded with higher rates of concern towards students with disabilities than they did for general education students. Nevertheless, teachers also reported higher rejection rates for students with disabilities than for students without disabilities. Furthermore, students with behavioral disabilities received a higher rate of rejection than did students with learning difficulties.

The teachers who interacted with students with disabilities in behavioral domains reported high ratings of rejection and provided mostly negative feedback to students in general education classrooms. The findings suggested that an attitude of rejection or concern can be observed based on the type of interactions teachers have with students with disabilities. The researchers suggested the need for additional exploration into the attitudes and interactions of teachers and students with disabilities across various contexts (Cook & Cameron, 2010). As with many studies of this type, this study was limited to
only one setting and focused on a limited set of indicators characterizing teacher-student interactions.

Hornstra, Denessen, Bakker, Van Den Bergh, and Marinus (2010) examined the attitudes of teachers toward dyslexia and the impact of their attitudes on the academic achievement of students labeled as dyslexic in comparison with those who were not labeled as dyslexic. The study participants were 30 general education teachers in grades 2-6 from 16 different schools. The teachers’ attitudes were determined through observation by the research team as well as a self-report measure completed by the teacher. The researchers examined associations among the teachers’ attitudes, their expectations for student achievement, and the actual achievement of students. The results revealed that the observable indicators of teachers’ attitudes predicted teachers’ expectations for students with dyslexia and that teachers’ expectations predicted achievement for all students, not just those with dyslexia. This finding supports the results of earlier research showing the association between teacher expectations and student achievement. One of the study’s limitations, however, was its exclusive focus on students with dyslexia. Whether or not similar associations would also be evident for students with disabilities other than dyslexia is not known.

**Summary of research on teachers’ attitudes toward students with disabilities.**

The body of research on teacher’s attitudes toward students with disabilities is limited, but growing. Nevertheless, findings from this line of inquiry indicate that teachers’ attitudes influence their behaviors, and that their behaviors, in turn, influence student outcomes. Some of the research shows, however, that experiences working with
students with disabilities, relevant professional development, and support from
administrators can help teachers become more positive about the inclusion of students
with disabilities. Positive experiences and appropriate supports also seem to be associated
with teachers’ increased expectations for the achievement of these students.

**Receptivity and Attitude Measures**

*Receptivity to* and *attitude toward* are psychosocial constructs. Researchers use
constructs to conceptualize intangible human characteristics—traits, abilities, and
dispositions that people cannot observe about other humans directly (Aiken, 2002:
Mueller, 1986; Sharma, 2006).

The construct, *receptivity to* refers to a person’s openness, willingness to entertain
an idea, or inclination to change; the construct, *attitude toward* refers to feelings and
emotions in response to particular events or objects that culminate in likes or dislikes
researchers use the two construct interchangeably. For example, Sharma (2006) defined
receptivity to change as an attitude to implement, measured through the behavioral
expressions of attitude. Attitude and receptivity—and other psychological and social
constructs—can be measured in various direct and indirect ways.

The quality of information gathered about constructs such as *attitude toward* or
*receptivity to* is contingent on the quality of the measurement method used to gather it.
One method relies on direct observations of individuals’ behavior (Bogdan & Biklen,
1998). Critics of this method suggest that participants are aware of their observers and
may alter their behavior accordingly (Aiken, 2002; Mueller, 1986). As a result,
methodologists recommend that direct methods be employed on multiple occasions across various settings and samples (Bogdan & Biklen, 1998; Mueller, 1986).

Another frequently used method for gathering information about attitudes and receptivity is the interview or questionnaire. In contrast to direct observations, the interview or questionnaire is considered to be unobtrusive to participants and is based on the assumption that participants are cognizant of and willing to share their perspectives, attitudes, and levels of receptivity (Aiken, 2002; Mueller, 1986).

Covert methods of assessing attitudes provide a less intrusive way to measure attitudes and therefore diminish the impact of social desirability bias. Covert measures are often used when researchers believe that participants hold attitudes that they are unwilling to reveal (Mueller, 1986; Wittenbrink & Schwarz, 2007). One example of a covert method for assessing attitudes is priming, which presents a participant with a word or picture that relates to the topic of interest and an accompanying negative or positive descriptor. Various methodologists discuss this method in detail. For more information, consult Aiken (2002); Fazio, Jackson, Dunton, and Williams (1995); or Hornstra (2010).

The most commonly used measures of attitude and receptivity are scales assessing levels of agreement with statements that communicate negative or positive feelings towards something or someone (Aiken, 2002; Gable & Wolf, 1993; Mueller, 1986; Robinson et al., 1991). Items on attitude and receptivity scales generally include opinion statements and behavioral intention statements (Mueller, 1986; Sharma, 2006). Likert-type scales are frequently used to measure the levels of agreement or disagreement with statements designed to elicit self-reports of attitude or receptivity.
The published literature measuring attitudes related to various education-related topics is very large—far too large to review in this chapter. The literature on receptivity is much smaller. Two studies illustrate this body of literature.

First is a study conducted by Sharma (2006). His research measured teachers’ receptivity to curriculum changes and predictors of their receptivity. Findings showed that the teachers responding to the research instrument were receptive to change—a finding that does not fit well with findings from observations of teachers’ behavior. Perhaps social desirability bias influenced the results of the study. According to Sharma (2006), some variability in reported receptivity to change was explained in the regression analyses by teachers’ assessment of the availability of resources.

The second study, conducted by Collins and Waugh (1997), investigated the receptivity of teachers to instructional and systemic change. Using a four point Likert-type scale to measure receptivity, the researchers assessed the impact of several independent variables—teachers’ perception of student readiness, teachers’ level of fear, and teachers’ assessment of the practicality of a change—on their receptivity to the change. The study also included several demographic/situational variables as—gender, experience, size of school, teaching focus, promotional position, size of school, type of school, location of school—to be explored in association with teachers’ receptivity to change. The study found that 49% of the teachers had positive attitudes toward and expressed the intention to implement systemic change. Additionally, 51% expressed the intention to implement instructional change (Collins & Waugh, 1997). The researchers found that the following situational, independent variables were associated with teachers’
attitudes and intentions: age of the teacher and number of years teaching. These two variables were found to be associated positively with receptivity of proposed changes. This study was limited to a small sample size and a limited number of survey items. These limitations make generalizability difficult.

**Summary**

This chapter discussed the extant literature pertinent to the dissertation. First it reviewed literature about the history of special education legislation with particular emphasis on the provision for educating students in the least restrictive environment. Next it turned to literature on teachers’ attitudes toward inclusion (or, in the earlier literature, mainstreaming). This part of the chapter also reviewed studies of predictors and outcomes of teachers’ attitudes toward inclusion. The final part of the chapter considered literature about different ways to measure attitudes (and the related construct, receptivity).
Chapter Three

This study explored variables that are associated with principals’ receptivity to RTI by addressing the following research questions: (1) To what extent does the combination of middle school principals’ length of experience (as a principal and as a teacher); their experience as general educators, special educators, or both; and their instructional philosophy predict their receptivity to RTI? (2) To what extent is the length of middle school principals’ teaching experience associated with their receptivity to RTI? (3) To what extent is the length of middle school principals’ administrative experience associated with their receptivity to RTI? (4) To what extent is the experience of middle school principals as general educators, special educators, or both associated with their receptivity to RTI? (5) To what extent is the instructional philosophy of middle school principals associated with their receptivity to RTI?

As these research questions suggest, the aim of this study was to investigate personal characteristics that may be associated with middle school principals’ receptivity to RTI—the dependent variable of interest in the study. These personal characteristics—that is, the length of principals’ teaching experience, the length of principals’ administrative experience, principals’ professional experience as general or special educators (or both), and principals’ predominant instructional philosophy—constitute the independent variables that the study examined. The study made use of regression models to test possible associations between the independent variables listed above and

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2 Note that, following pilot testing, the construct and the instrument to measure it changed slightly. The revised dependent variable became Leadership Support for Interventions for Students (LSIS).
principals’ receptivity to RTI (a construct that later became leadership support for interventions).

In this chapter, I discuss the methodology and research design that guided this study and describe the methods that I used to gather and analyze data. The chapter includes four sections: methodology, research methods, validity, and definitions.

**Methodology**

According to DeVaus (2001), the methodology undergirding a research study is the set of perspectives about reality and knowledge on which the approach to inquiry is based. The methodology influences how a researcher collects information and uses it to support claims about truth.

Although truth can be understood to mean different things, many scientists, including social scientists, believe that claims about cause and effect are among the most important types of truth claims (Ringer, 2006; Thompson, Diamond, McWilliam, Snyder, & Snyder, 2005). With educational research, however, considerable debate exists about the approaches to inquiry that are able to support causal truth claims, such as claims about the effects of different instructional and administrative practices (Gorard, 2002; Hodkinson, 2004). Less contentious, however, are approaches to inquiry that produce descriptive claims about schools, their constituents, or their practices (Gorard, 2002; Hodkinson, 2004). Surveys, for example, can produce descriptions of self-reported characteristics, attitudes, or practices of educators. Many scholars, moreover, believe that surveys and other sorts of cross-sectional methods are useful for generating tentative explanations of instructional as well as other social phenomena (DeVaus, 2001).
Assumptions of survey research.

Researchers use surveys to collect information from a group of individuals (Babbie, 1990; DeVaugh, 2001). According to Salant and Dillman (1994, p. 13), the aim of a survey is to gain accurate insights about respondents’ thoughts, beliefs, attitudes, or actions. The information obtained via surveys can be quantitative or qualitative depending on the research questions and the construction of the questionnaire items presented to the respondents (Babbie, 1990; Salant & Dillman, 1994).

Researchers in the social and behavioral sciences often use surveys to gather information, not just about a particular set of individuals, but about groups of people that constitute discrete populations (Babbie, 1990; DeVaugh, 2001). Because a discrete population can be large, however, researchers often survey a subset of the population (i.e., a sample) that is representative of the larger population (Aron, Aron, & Coups, 2005; Babbie, 1990). The idea behind this approach is that findings from a representative sample are likely to correspond closely to findings that theoretically would be obtained from surveying the population as a whole.

Nevertheless, the assumption that a particular sample will be representative is an inference based on sampling theory (Aron et al., 2005; Tashakkori & Teddlie, 1998). Increasingly sophisticated methods for drawing representative samples or for weighting samples to make them more representative are now available to researchers (Perry, 1979). Whatever approaches are used, however, researchers can limit sources of error by planning sampling designs that address potential difficulties (Murthy, 1963; Perry, 1979).
Such plans focus on the survey’s sampling frame, sample selection process, and sample size (Murthy, 1963; Perry, 1979; Salant & Dillman, 1994).

The sampling frame is a list of possible respondents from which a sample might be drawn (Salant & Dillman, 1994). Not just the most readily available list, the sampling frame needs to be a list with the greatest likelihood of representing the characteristics of the population (Babbie, 1990; Salant & Dillman, 1994). For example, a researcher seeking to explore political attitudes in the state of Ohio would not create a sampling frame consisting of registered voters from four counties only; rather a complete sampling frame would include registered voters from all 88 counties.

The procedure for picking the sample from the sampling frame is known as the selection process (Babbie, 1990; Murthy, 1963; Perry, 1979). Drawing from a carefully identified sampling frame, the researcher uses a simple random process (or some other systematic process) to select a subset of participants that is representative of the given population (Babbie, 1990; Murthy, 1963; Perry, 1979). For the sample to be representative there must be equal probability that any individual in the sampling frame could be selected during the sampling process (Babbie, 1990; Murthy, 1963; Perry, 1979). Sampling error increases whenever complete randomness is compromised (Babbie, 1990; Murthy, 1963; Perry, 1979). Nevertheless, in some cases, random sampling is not feasible, and greater amounts of sampling error need to be tolerated.

Beyond the approaches used in the selection process, the researcher can also control the size of the sample in order to reduce the chance of sampling error (Babbie, 1990; Murthy, 1963; Perry, 1979; Salant & Dillman, 1994). The researcher determines
the sample size in consideration of answers to the following questions: What is a reasonable amount of sampling error? How large is the population? How much variation exists in the population as it relates to concerns of the study (e.g., personal and contextual characteristics)? What is the smallest subset within the population for which information is needed? (Salant & Dillman, 1994).

In general, however, a large sample enables the researcher to plan for the possibility that some people who are surveyed will choose not to respond. Non-response bias can occur when a significant number of people in the sample do not respond to the complete survey (Salant & Dillman, 1994, p. 43). The omission of these peoples’ responses can reduce the extent to which information gathered via the survey will represent the probable views of the population as a whole (Salant & Dillman, 1994). Even with large sample sizes and randomly selected participants, some conditions limit the extent to which a particular sample is able to represent a population accurately (Babbie, 1990; Salant & Dillman, 1994). According to Perry (1979), for example, highly changeable variables or variables highly dependent on context tend to contribute to sampling error in contrast to variables that can be operationalized and measured simply (i.e. height, eye color, age, and so on). To the extent possible, therefore, the variables that a researcher includes in a survey should be stable enough to elicit similar responses across a reasonable span of times and across a number of different places (Babbie, 1990).

**The purposes of survey research.**

According to several methodologists (e.g., Babbie, 1990; De Vaus, 2001; Fowler, 2009), surveys, like other approaches to research in the social sciences, can be used for
three purposes: to provide descriptions, to explore possible associations, and to support causal explanations. In many studies that use survey methods, researchers accomplish more than one of these purposes. Nevertheless, according to Babbie (1990), most surveys do serve a descriptive purpose (p. 52).

Descriptive research, as its name implies, uses data to describe an existing population, phenomenon, or problem (Hsu, 2005). Descriptive research often seeks to answer research questions focusing on “what,” “where,” and sometimes even “how” (West, 2009). According to some methodologists, early research in a line of inquiry often focuses on description (Hsu, 2005).

A survey can also be used in an exploratory way to investigate an unexplored phenomenon or to offer a new approach to studying a phenomenon that has been studied only in certain ways in the past (Babbie, 1990). In some cases, exploratory research marks the beginning of a line of inquiry, providing insights that lead to new research questions and studies positioned to answer them (Ringer, 2006; Thompson et al., 2005). Exploration differs from description in that descriptive research seeks to characterize the features of social phenomena, whereas exploration surfaces tentative explanations of social phenomena (Ringer, 2006; Thompson et al., 2005). Exploratory research, then, can provide a beginning point for explanatory research in a way that descriptive research cannot.

According to Babbie (2007), exploratory research often uses correlational and comparative designs because these approaches can provide information about the strength of the relationships between and among variables (see also Lauer, 2006; West, 2010).
Comparative designs allow researchers to identify how different groups think or behave (West, 2010). Correlational designs, in their simplest form, allow researchers to examine the relationships between two variables to see if changes in one variable are associated with changes in the other (Babbie, 2007). More complex correlational designs look at the association(s) between several predictor variables and one or more explained variables.

Unlike descriptive and exploratory research, explanatory research focuses on cause and effect relationships (DeVaus, 2001; Hathaway, 2005). This type of research goes beyond describing a condition, identifying associations, or comparing groups. Often relying on experimental or in some cases quasi-experimental designs, explanatory research tests hypotheses about the strength and direction of causal associations (Lauer, 2006; Salant & Dillman, 1994; West, 2010).

The aims of this study were both descriptive and exploratory. I sought to describe certain circumstances: Ohio middle school principals’ tendency to favor one instructional philosophy over another, their experiences as either general or special educators (or both), their level of experience as teachers, and their level of experience as administrators, and, most importantly, their leadership support for interventions. The study was also exploratory because it investigated the potential association between a set of characteristics of principals (i.e., their instructional philosophies, their experiences as general or special educators [or both], their level of experience as teachers, and their level of experience as administrators) and their leadership support for interventions.
Research Methods

This section describes the research methods that I used to answer the research questions posed by the study. It explains the study’s research design, population and sample, instrumentation, and procedures for data analysis.

Research design.

This study used a survey to collect data from a representative sample of middle school principals in Ohio. The data provided descriptive information about these principals’ leadership support for interventions as well as about various personal characteristics, namely their preferred instructional philosophy, experience as either general or special educators (or both), years of experience as teachers, and years of experience as administrators.

Data collected through the survey supported the construction of a multiple regression model to show the extent to which each of the four independent variables—that is, principals’ instructional philosophy, experience as either a general or special educator (or both), years of experience as a teacher, and years of experience as an administrator—explained variance in the dependent variable, leadership support for interventions.

Population and sample.

The population for this study consisted of all public school principals of middle grades in the state of Ohio. I decided to limit the population to principals in one state because principals in the same state respond to the same policy context, in contrast to principals from across the nation, who respond to different policy contexts based on the
states in which they are employed. In other words, all school districts in Ohio respond to
the same set of policies governing district-level and school-level implementation of RTI.

There are currently 3308 public schools in the state of Ohio (Ohio Department of
Education, 2012). Middle schools in the state of Ohio typically enroll students in grade
levels ranging from 5th to 8th grade. As of 2012, 629 Ohio schools were configured to
house middle grades (Ohio Department of Education, 2012). Some of these schools
included grade 5 through 8, some included grades 6 through 8, and a few included other
configurations of middle grades (i.e. 2 through 7, 1 through 8).

In general every middle school has one principal with executive responsibility for
school programs and operations. These principals constituted the population that I
surveyed. They also constituted my sample.

Because I surveyed the population of middle grades principals, I needed to be sure
to receive responses from as many of the 629 principals in the population as possible.
Procedures for obtaining a high return rate were critical to this effort. I worked to ensure
a high return rate through phone calls and outreach to these principals.

**Instrumentation.**

I collected data using a questionnaire that I developed. The questionnaire included
three parts, each with six to 12 questions: (1) a section eliciting demographic information
from respondents, (2) a section with items from the *School Practices Survey Form M.2*
(Chandler, 2002) that measure educators’ instructional philosophy, and (3) an instrument
that I constructed to measure principals’ leadership support for interventions. (See the
discussion in Chapter 4 about how the construct (and the name I used to make reference to it) changed in response to data from the pilot survey).

The demographics sections of the questionnaire included three items, each relating to one of the study’s independent variables: the principal’s years of experience as an administrator, his or her years of experience as a teacher, and his or her experience as a general or special educator (or both). In addition, I included one item—gender—that helped me to determine the representativeness of the responses and that I later used in an ancillary analysis.

The second section of the questionnaire presented items from the School Practices Survey. Chandler developed The School Practices Survey in the years between 1999 and 2002 in order to distinguish between traditional and progressive instructional practices used in public and parochial schools in the states of Pennsylvania and Ohio (Chandler, 2002). The instrument included 10 items regarding school practices and asked respondents to choose which statements most closely aligned with practices in their school. The statements target the specific actions that could be attributed to either a traditional or a progressive instructional philosophy. Each statement included response choices that represented a 5-point continuum between the most progressive and the most traditional practices. Illustrative items are: Do you follow an established, year-by-year curriculum? Is instructional time used flexibly? Are students retained? Is the teacher viewed as the primary academic instructor? Are students grouped homogenously (i.e. tracked)? See Appendix A to see the full instrument. To score the instrument, the researcher sums responses to all 10 items.
Chandler conducted a series of pilot studies to evaluate the technical properties of the instrument (Chandler, 2002). His first pilot study included 27 schools in Pittsburgh, PA, and his second included 59 Catholic and 56 public schools in Southwestern Pennsylvania (Chandler, 2002). Both of these pilot studies focused on the feasibility of administering the instrument and the relevance of the items.

Chandler used a third pilot study to test the instrument’s reliability. He conducted this study in Ohio with a representative sample of 350 schools (Chandler, 2002). The study showed that the instrument had a test-retest reliability of .87 and a Cronbach alpha reliability of .86 (Chandler, 2002).

The third section of my questionnaire included items I developed to measure principals’ leadership support for intervention. These items comprised what I originally called the “Principals’ Receptivity to Intervention Survey Instrument” (PRISI) and later called the “Leadership Support for Interventions for Students” (LSIS). I decided to construct the instrument myself because I was unable to find a published instrument to measure the construct of interest.

The original conception for the PRISI came from my professional experiences as an educator over the course of 15 years. These experiences led me to speculate that receptivity (or support for) RTI was a complicated construct contextualized through principals’ beliefs, attitudes, personal experiences, and practices. For this reason, the original version of the instrument included separate sets of items relating to each of these expressions of the construct (i.e., beliefs, attitudes, experiences, and practices).
The beliefs section of the original PRISI consisted of 12 questions that sought to identify principals’ beliefs about students, learning, intervention, and leadership of the organization. The attitudes section of the PRISI consisted of 12 questions that sought to identify principals’ attitudes regarding intervention, change, student learning, collaboration, and problem solving. The personal experiences section of the PRISI consisted of 12 questions that asked about principals’ personal experiences working with special education students, general education students, and intervention programs as well as questions about principals’ training. Finally, the practices section of the PRISI consisted of 12 questions that sought to characterize principals’ efforts to implement intervention, allocate resources to intervention programs, prioritize intervention, and provide professional development about RTI to staff members. (For information about the final version of the scale, which I renamed the “Leadership Support for Interventions for Students” scale see Chapter 4).

All items on the PRISI provided response choices using a four-point Likert-type scale. The “neutral” response choice was omitted to keep principals from selecting the safe middle (or neutral) position. A copy of the pilot version of the entire questionnaire is provided in Appendix B.

I used several procedures to test the relevance and feasibility of items on the instrument. First, I conducted a focus group interview with current and retired administrators who provided feedback about the items included on the pilot version of the questionnaire. My questions focused on the clarity of each item and the extent to which the item fit with the construct, receptivity to RTI. I used information from the focus group
interviews as a basis for revising the instrument. I rewrote items that seemed unclear to focus-group members. Their comments, however, did not indicate the need to remove any of the items.

Using the version of the instrument that I had modified in response to comments from the focus group participants, I conducted a pilot study to determine how well the instrument functioned. Details about the pilot study are provided in Chapter 4.

**Data collection.**

The data collection for this study took place over a four-week period during the months of September and October. Using this particular time period allowed for principals to open their buildings and get the school year started prior to being asked to respond to a survey. As a former building principal, my professional experiences had suggested to me that the month between early September and early October was a good time frame for encouraging principals to participate in my study.

I sent out the survey three times in total. I started by sending it to a total of 629 respondents. The first week, my responses totaled 120. The second week, my total responses increased to 203. During the third and fourth weeks, I made personal phone calls and sent personal emails. I closed the survey window with a total of 283 responses. Overall, the principals I contacted were very responsive, and many replied back with interest in the research endeavor and future collaboration. The response rate of the survey was 45%.
Data analysis.

I used descriptive statistics to analyze participants’ responses to each item on the questionnaire. First, I calculated frequencies and generated histograms to examine the character of the distribution of responses to each item. An inspection of the distributions helped me determine if the variables met the assumptions required for inclusion in a multiple regression equation. Next, I calculated means and standard deviations for each continuous variable.

Following the calculation of univariate statistics, I summed the appropriate items to produce values for the two scales included on the questionnaire, the LSIS (i.e., the measure of leadership support for interventions) and the School Practices Survey (i.e., the measure of instructional philosophy). I then examined the frequencies as well as the means and standard deviations for the two scales.

Next, I calculated correlation coefficients for the variables in the model. I used this procedure to ensure that no two independent variables were so closely related as to represent a multicollinearity threat. I also used this procedure to investigate the bivariate relationships between LSIS scores and each independent variable in the model.

Of course, bivariate associations do not tell the whole story, and my research questions required the type of modeling that enabled me to see the combined association between a set of independent variables and the dependent variable of interest, namely leadership support for interventions as measured by the LSIS. The approach to statistical modeling that made sense as a way to answer my research questions was multiple regression. This method allowed me to understand the strength of the influence of the
combined set of independent variables as well as the strength of the influence of each independent variable in the model (Aron & Aron, 2005; Babbie, 2007; Hardy & Bryman, 2004; Statsoft, 2011).

The regression analysis for this study was conducted in two parts. This first part of the analysis used a direct entry model. The second part—an ancillary analysis—used a stepwise model (The complete discussion of the Regression Analysis is presented in Chapter 5).

I constructed an ordinary least square, direct entry regression model with the LSIS total score as the dependent variable. The independent variables included in the model were: instructional philosophy; years as a principal; years as a teacher; and experience as a general educator or as a special educator. The variable, experience as both a special educator and a general educator was omitted from the model in order to keep from introducing a multicollinearity threat.

Next, I conducted an ancillary analysis using a stepwise regression. (A full explanation of this analysis is presented in Chapter 5). The stepwise regression model included all of the same independent variables as I had included in the direct entry model with the addition of another variable, gender.

I used the Statistical Package for the Social Sciences (SPSS) software program to complete the statistical analyses for this study. Quantitative methodologists often recommend this statistical software package as an appropriate tool for routine statistical analyses such as those that were performed as part of this study (e.g., Field, 2009).
Output from the SPSS package aligned with the output that I needed in order to answer my research questions.

**Validity**

Validity in social science research relates to the degree to which a study’s findings represent the truth (Babbie, 2009; Tashakkori & Teddie, 1998). The validity of a research design concerns the extent to which the design incorporates features that will produce true findings (Morse, Barrett, Mayan, Olson, & Spiers, 2002; Tashakkori & Teddie, 1998).

Many researchers in the social sciences ground discussions of validity in guidelines relating to the construction of experimental studies. Some of these guidelines apply to correlational studies, such as the one selected for this dissertation (Babbie, 2009; Converse & Presser, 1986; Neuman, 2006; Tashakkori & Teddie, 1998). Methodologists have also found ways to link some of these guidelines to the design of qualitative studies (Morse et al., 2002; Tashakkori & Teddie, 1998).

Discussions of the validity of experimental research distinguish between internal and external validity (Cook & Campbell, 1979). Internal validity concerns the extent to which a research design will yield true conclusions about a cause-and-effect relationship (Morse et al., 2002; Tashakkori & Teddie, 1998). For this reason, some researchers also treat the terms “causal validity” and “internal validity” as interchangeable (Morse, et al., 2002; Tashakkori & Teddie, 1998). Experimental studies that have strong internal validity are designed to support claims about cause and effect (Babbie, 2009; Converse & Presser, 1986; Neuman, 2006; Tashakkori & Teddie, 1998). Some methodologists have
developed criteria by which researchers can gauge the internal validity of experimental studies. Of these, Campbell and Stanley’s (1963) and then Cook and Campbell’s (1979) are the most well-known. These methodologists operationally defined a study’s internal validity as the extent to which its design is able to sustain a particular set of threats. Some threats can be historical context, maturation, testing, instrumentation, regression, bias, mortality, causal time order, compensation, compensatory rivalry and a number of other variables (Babbie, 1990, p. 230-231; Cook & Campell, 1979).

With correlational studies, in contrast to experiments, the independent variable is not manipulated; rather the variance in each independent variable occurs naturally as an outcome of biological or social processes or interactions among processes (Campbell & Stanley, 1963; Cook & Campbell, 1979). Researchers who conduct correlational studies view independent variables as potential influences on (or predictors of) a dependent variable. These independent variables often become known as “predictor variables” because of their potential to generate predictions about the dependent variable (Campbell & Stanley, 1963; Cook & Campbell, 1979). Cone and Foster (1996) described three threats to the internal validity of correlational studies: reverse causation, confounding variables, and reciprocal causation (Cone & Foster, 1996).

Reverse causation can occur when a variable that the researcher has included as a dependent variable in a statistical model is actually a cause of one of the independent variables in the model (Cone & Foster, 1996). Although predictor variables are not “causes,” per se, researchers often see them as influences. For example, when researchers find that socioeconomic status (SES) influences academic achievement, they are implying
that lower SES leads to lower academic achievement and higher SES leads to higher academic achievement. If, however, higher achievement were found to cause higher SES, then the typical arrangement used in correlational models would need to change. Rather than including SES as an independent variable and academic achievement as the dependent variable, their positions would be reversed. Cone and Foster (1996) offered a different example of the same potential threat; their example related to the association between the number of doctors who respond to an injury and the severity of the injury.

A confounding variable, which typically quantifies a condition external to a correlational model, compromises the model’s internal validity through its association with both the independent and dependent variables in the model (Cone & Foster, 1996). A confounding variable can lead to inaccurate inferences about the influence of one or more predictor variables (Campbell & Stanley, 1963; Cook & Campbell, 1979). Biased samples sometimes allow confounding variables to obscure the associations between the variables in a correlational model (Campbell & Stanley, 1963; Cook & Campbell, 1979). Sometimes inadequately specified models (i.e., models that fail to account for important independent variables) lead to false conclusions because the variables they do include serve as proxies for the actual predictor variables (Campbell & Stanley, 1963; Cook & Campbell, 1979; Cone & Foster, 1996). For example, if one region of a state has a disproportionate number of low SES families and another a disproportionate number of high SES families, then the apparent association between region and school achievement may actually obscure the actual association between family SES and school achievement. Including control variables in correlational models is the way that researchers typically
limit the extent to which confounding variables threaten the internal validity of such studies (Campbell & Stanley, 1963; Cook & Campbell, 1979; Finkel, 1995). In my study, I had hoped to include district resources as a control variable. (See Chapter 5 for an explanation about why it became impossible to include this variable.)

Reciprocal causation occurs when two variables, positioned as an independent variable and one positioned as a dependent variable, actually influence one another in a feedback loop (Cone & Foster, 1996; Finkel, 1995). Reciprocal causation results in intensifying or accelerating cycles of influence. For example, the association between lack of exercise and obesity illustrates how reciprocal causation functions within a correlational study (Finkel, 1995). A lack of exercise can cause obesity; however, at the same time obesity can keep a person from exercising regularly. As the amount of exercise decreases, obesity increases, and as obesity increases the amount of exercise further decreases. This cycle of influence produces a feedback loop (Finkel, 1995). With feedback loops of this type, researchers cannot rely on simple correlational procedures to identify associations between the predictor and the predicted variable (Finkel, 1995).

Because study validity is extremely important, researchers work hard to design studies that reduce validity threats (Babbie, 2007; Campbell & Stanley, 1963; Cone & Foster, 1996; Cook & Campbell, 1979; Finkel, 1995). Nevertheless, no study design can completely eliminate all threats to validity (Babbie, 2007; Campbell & Stanley, 1963; Cone & Foster, 1996; Cook & Campbell, 1979; Finkel, 1995; Neuman, 2006). For this reason, researchers draw on prior literature to help them design correlational models that include the correct set of variables in the correct theoretical relationship to one another.
(Cook & Campbell, 1979; Neuman, 2006). Researchers are careful to talk about “associations,” “relationships,” or “influences,” rather than about “causes” (Campbell & Stanley, 1963).

In addition to these cautions, researchers often use complex regression models that incorporate various procedures for simulating experimental designs (Bryk & Raudenbus, 1992; Cone & Foster, 1996; Curren & Wirth, 2004; Goldberger & Duncan, 1973; Neuman, 2006). Among these approaches are hierarchical linear modeling (Bryk & Raudenbush, 1992) and structural equation modeling (Goldberger & Duncan, 1973).

The external validity of a study refers to the generalizability of its findings, in other words, the extent to which its findings apply to groups beyond those included in the study’s sample (Babbie, 2009; Converse & Presser, 1986; Neuman, 2006; Tashakkori & Teddie, 1998). Threats to external validity limit generalizability and are most significant in quantitative studies seeking to describe or explain phenomena that apply to large segments of the population.

The external validity of correlational studies depends on design features that help ensure that the study’s findings will apply to people other than those who participated in the study, in places other than the one studied, and across different time periods (Campbell & Stanley, 1966; Isaac & Michael, 1971). Drawing a representative sample from the total population of participants is a key step toward ensuring the study’s external validity (Campbell & Stanley, 1966). Conducting social science research in real, rather than laboratory settings often contributes to greater generalizability (Isaac & Michael, 1971). For this reason, some researchers argue that quasi-experiments are better than true
experiments for testing the efficacy of instructional treatments (Goldberger & Duncan, 1973; Isaac & Michael, 1971). Finally, replication of studies helps to demonstrate their applicability across different groups of people, locations, and time periods (Goldberger & Duncan, 1973; Isaac & Michael, 1971).

**Limitations.**

First, because it used correlational techniques with information collected through a survey, this study was limited to making associational rather than causal claims (see e.g., Campbell & Stanley, 1963; Cone & Foster, 1996; Curren & Wirth, 2004; Neuman, 2006). The variables of interest (e.g., principals’ instructional philosophy) could not easily be manipulated experimentally, thereby justifying the use of the correlational design.

Second, this study used a self-reporting survey to collect data from the respondents. This type of data collection poses a limitation because it relies on participants’ accuracy and honesty (Converse & Presser, 1986). Further, social desirability bias may lead to exaggerated or overly positive responses. Social desirability bias is a problem in survey research because respondents’ desire for social acceptance or need for social approval sometimes leads them to give answers that are not completely honest (Phillips & Clancy, 1972). I encouraged respondents to give honest and accurate reports of their practices and perspectives by explaining in the cover letter accompanying the questionnaire the importance of the honest disclosure of their perspectives. (See Appendix D.) I also worded questionnaire items carefully so that principals would not be able to guess what the most socially desirable response might be.
Another limitation of the study was the relatively small number of independent variables included in the regression model. The choice to select these few variables, however, came from a careful reading of the related literature. I selected variables that this literature suggested might have an influence on principals’ support for interventions. Other possible predictor variables did not seem to have theoretical support. Including them might have complicated the regression model without contributing to additional explanatory power.

In addition to these limitations, findings from the study may be limited in their generalizability. I surveyed principals of middle grade level schools in the state of Ohio only. Findings therefore could not be generalized to principals in other states or to principals in buildings serving very young children or adults. Furthermore, because principals are the only group that I surveyed, findings do not apply to teachers, superintendents, or other groups of school personnel.

**Operational Definition of Terms in the Model**

The following were the operational definitions for the variables used in this analysis:

- *Instructional Philosophy* – self-reported beliefs about teaching and learning as determined by responses to items on *Chandler’s School Practices Scale*.

- *Leadership Support of Interventions for Students* – the self-reported openness and willingness to entertain school changes associated with Response to Intervention as reported on a new instrument developed as part of this study. The instrument is called Leadership Support of Interventions for Students Survey (LSIS).
• **Principals’ administrative experience** – the self-reported amount of time that an individual has served in a position as an educational administrator.

• **Principal’s experience as a classroom teacher** - the self-reported work experience as a general educator, a special educator, or both (years).

• **Principals' overall teaching experience** – the self-reported time an individual has served in a position with the title, “classroom teacher (years).”

**Summary**

This chapter presented the methodology used to conduct this study. The aims of this study were both descriptive and exploratory. The research was designed to explore a small number of independent variables (instructional philosophy, experience as an administrator, overall experience as teacher and experience as a general education teacher, special education teacher, or both). This study employed survey methods to collect data from the population of middle school principals in Ohio. The data provided descriptive information about principals’ leadership support of interventions for students as well as about various personal characteristics, namely their instructional philosophy, experience as either general or special educators (or both), years of experience as teachers, and years of experience as administrators. The intensity of these potential associations was explored through a direct and stepwise regression.

I constructed an instrument to measure principals’ leadership support of interventions for students. As a part of the scale development, I conducted both a focus group and pilot study. A complete discussion on the development of this scale will be presented in Chapter 4.
Chapter Four

Introduction

Data collection for this study made use of an instrument that I assembled. The instrument included a published scale to measure instructional philosophy as well as demographic items and a researcher-developed scale to measure what I originally conceptualized as principals’ receptivity to RTI. This chapter will explain the processes I used to construct the data-collection instrument, including work to validate the scale measuring instructional philosophy and the work to develop the new scale measuring principals’ receptivity to RTI.

Scale Development

The first step in developing the initial draft of the Principal’s Receptivity to Intervention Survey Instrument (PRISI) was to conduct a careful review of the current research literature on (1) the role of the principal in providing leadership to RTI and (2) receptivity and attitudes towards inclusive education. This review of the literature revealed the critical dispositions and practices that served as the basis for constructing items for the scale. These items fit into four domains: beliefs, attitudes, personal experiences, and practices. Additionally, I looked closely at how other similar instruments were organized and formatted: the School Practices Scale (Chandler, 2000), the Heterogeneous Education Teacher Survey (HETS, Vila et al, 1996), and the Regular Education Initiative Teacher Survey-Revised (REITS-R; Villa et al, 1996) so that I could model the organization and formatting of my new instrument on these earlier ones.
Focus group interview.

The next step in the process of creating a valid and reliable instrument for measuring principals’ receptivity to RTI entailed a focus-group interview with administrators who were familiar with RTI and the leadership dispositions, beliefs, and practices that make RTI successful. The specific purpose of the focus group interview was to gather feedback about the items on the initial draft of the Principals’ Receptivity to Intervention Survey Instrument (PRISI). I invited a number of educational administrators to participate in the focus group interview, and seven agreed: three high school principals, three elementary school principals, and one district administrator.

These administrators provided commentary about the first draft of the instrument during a 90-minute interview. I used the following questions to guide the discussion: (1) Are the items clearly worded? (2) Do you understand the meaning of each item? (3) Are there potentially important items that are missing? (4) Are there repetitive or redundant items? I asked focus group participants first to read the items on the questionnaire and then to respond in writing to the questions listed above. I also asked them to write down any specific suggestions for changes to individual items.

Following this step, I engaged all participants in a discussion of the instrument. I recorded the focus group session using a digital voice recorder, and I saved the recording in a format that allowed me to play it back through the computer. This approach facilitated the transcription process. My transcript was not verbatim but rather included a list of all of the significant points made by participants in the focus group interview.
Overall, members of the focus group expressed the opinion that the items were clearly worded and understandable. They suggested that I operationally define two terms: *Response to Intervention (RTI)* and *Responsive Instruction*. All seven members of the group agreed that I needed to provide written definitions of these concepts so that the principals who would be responding to the questionnaire would have a common understanding of their meaning. The focus group members were certain that a lack of clarity would lead to confusion and perhaps inaccurate responses from participants. In addition to this suggestion, the group agreed that the following changes would be helpful:

- **PRISI: Beliefs, Item 1:** Contextualize the question by adding *in my school* at the end of the statement. I finalized the item based on their advice so that it read, “Giving additional time to struggling students is important in my school.”

- **PRISI: Beliefs, Item 7:** Replace the word “function” with the word “place.” The finalized item stated, “A building wide framework for providing intervention needs to be in place in all schools.”

- **PRISI: Attitudes, Item 5:** Frame the question in a positive way. The revised item read, “I feel that teachers are generally supportive of new initiatives.”

- **PRISI: Attitudes, Item 9:** Remove the words “very strongly” from the statement, “I feel very strongly that change promotes growth.” The revised item read, “I feel that change promotes growth.”

- **PRISI: Personal Experiences Item 3:** Remove the word “services.” The word “services” is indicative of Special Education. Removal of the word eliminates
confusion. The revised item stated, “I have been trained in providing intervention to students.”

- PRISI: Personal Experiences Item 4: Remove the word “services.” The word “services” is indicative of Special Education. Removal of the word eliminates confusion. The revised item read, “I have seen interventions positively impact student learning.”

- PRISI: Personal Experiences, Item 8: Frame the statement in a positive way. The revised item read, “I am very familiar with Response to Intervention.”

- PRISI: Personal Experiences, Item 12: Remove extra wording. The final item stated, “I am or have been a member of a team committed to providing interventions to students (i.e. RTI or Intervention Assistance Team IAT).”

During the concluding discussion, the focus group participants offered supportive comments about the topic of the research and the quality of the questionnaire. Members of the group indicated that the PRISI would be a valuable tool to use during the hiring process as well as a worthwhile instrument for principals to complete as a self-reflective exercise. The participants stated that all of the questions included on the questionnaire were of importance, but discussed the possibility that some items might be redundant. The group determined that despite the similarity of some items, they did see the value of having items that reflected subtle differences in perspective. Six of the seven members shared the opinion that the questions were easy to answer and of interest to them. They also agreed that the number of questions was appropriate. Only one member disagreed,
stating that principals would be more likely to respond to the questionnaire if there were fewer questions.

**Pilot study.**

Using the version of the instrument modified in response to comments from focus-group members, I conducted a pilot study to determine how well the instrument functioned and to gather additional information to improve the instrument. Ultimately, I hoped that, through factor analysis of data from the pilot, I would be able to identify two viable scales for the PRISI (one measuring attitudes and one measuring actions).

I completed the pilot study over a four-week time period spanning May 30 to June 29, 2013. I emailed principals in the states of California, Iowa, Nebraska, and Washington, asking them to complete the pilot version of the questionnaire. Originally, I had planned to seek responses from principals in the state of Iowa only. In order to use factor analysis for analyzing data from the pilot study, however, I needed to ensure that I would have a large enough sample. Considering the number of items on the pilot version of the instrument, I determined that I would need a larger sample than I would be likely to receive from Iowa alone. As a result, I expanded the number of principals to whom I sent email requests by adding those whose email addresses I could find on state directories from the three other states (i.e. California, Nebraska, and Washington). Overall, I sent emails to a total of 3,011 principals.

In my email to potential participants, I included a navigational link that took each individual respondent directly to the questionnaire, which was mounted on the Qualtrics server. Using three email reminders, I sought to obtain the maximum response rate
possible. I was hoping to obtain at least 480 responses in order to have enough cases to warrant the use of factor analysis. I actually surpassed this goal, obtaining a total of 512 responses. After the four week period of data collection, I downloaded the responses from the Qualtrics site and prepared the data set for analysis using the SPSS statistics program.

Using the data from the pilot study, I conducted an exploratory factor analysis with the items from the instrument I had created to measure principals’ receptivity to RTI (i.e., the PRISI). The analysis was exploratory because the scale had never been used previously. Making use of principal components analysis with varimax rotation, I analyzed the 48 items on the scale. Output from the factor analysis is presented in Appendix I. As these results indicate, the analysis revealed 11 factors with eigenvalues above 1. Among these, Factor 1 explained 28% of the overall variance observed in responses to the instrument. Factors 2 and 3 also explained incremental additional amounts of variance, 8% and 4% respectively.

To determine the likely significance of the factors beyond Factor 1, I used two approaches: a scree plot and parallel analysis. Because of the relatively large sample size, I decided that Steven’s (1996) criteria would not be particularly helpful.

With the scree plot, I was looking for the point of inflection—a point that tends to show the break between interpretable and less interpretable factors. The scree plot, which appears below as Figure 5, clearly shows a point of inflection after Factor 3.
I continued to explore the data set by using an on-line program for performing parallel analysis (http://ires.ku.edu/~smishra/parallelengine.htm). Following advice from Horn (1965), I determined that I should retain only the factors with eigenvalues higher than those generated randomly by the parallel analysis program. The actual eigenvalues calculated for factors in the data set were: 13.26 (factor 1), 3.74 (factor 2), 1.93 (factor 3), and 1.86 (factor 4). The randomly generated eigenvalues for four factors from a data set with a sample size as large as mine were: 1.97 (factor 1), 1.88 (factor 2), 1.87 (factor 3) and 1.78 (factor 4). Beyond factor 4, all eigenvalues from the randomly generated set were higher than the actual eigenvalues I obtained—a finding that suggests that factors 1, 2, 3 and 4 were likely to be reliable, but that the other seven factors obtained through the principal components analysis were not likely to be reliable.

Following the advice of several authors (e.g., Garson, 2001; Klein, 2003), I examined the rotated factor matrix in order to discern the constructs that each of the four

Figure 5. Scree Plot for Principals’ Receptivity to Intervention Survey Instrument
reliable factors appeared to measure. First, I looked closely at the items loading on Factor 1. The rotated matrix for Factor 1 showed that a total of 14 items had factor loadings of .60 or above (item 29 with a factor loading of .64, item 32 with a factor loading of .62, item 33 with a factor loading of .61, item 37 with a factor loading of .71, item 38 with a factor loading of .71, item 40 with a factor loading of .62, item 41 with a factor loading of .77, item 42 with a factor loading of .71, item 43 with a factor loading of .71, item 44 with a factor loading of .72, item 45 with a factor loading of .69, item 46 loading at .70, item 47 loading at .75 and item 48 loading at .67) (See Appendix I). These items are listed below in Table 1.
Table 1

The Items Loading on Factor 1

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>29</td>
<td>I have observed students grow academically through the supports of an RTI model</td>
</tr>
<tr>
<td>32</td>
<td>I am very familiar with response to intervention.</td>
</tr>
<tr>
<td>33</td>
<td>I have attended professional development focused on providing intervention to struggling students.</td>
</tr>
<tr>
<td>37</td>
<td>I make response to intervention my priority at school.</td>
</tr>
<tr>
<td>38</td>
<td>I provide professional development time focused on meeting the needs of struggling learners</td>
</tr>
<tr>
<td>40</td>
<td>I create opportunities for general education, special education, and intervention specialists to collaborate.</td>
</tr>
<tr>
<td>41</td>
<td>I provide resources to support staff in sustaining RTI services within my building.</td>
</tr>
<tr>
<td>42</td>
<td>I coordinate meetings with staff to discuss intervention for students.</td>
</tr>
<tr>
<td>43</td>
<td>I communicate regularly with staff about the importance of providing responsive intervention to all learners.</td>
</tr>
<tr>
<td>44</td>
<td>I provide additional time to enable staff members to implement interventions.</td>
</tr>
<tr>
<td>45</td>
<td>I am involved in the planning of interventions in my school.</td>
</tr>
<tr>
<td>46</td>
<td>I lead intervention initiatives in my school.</td>
</tr>
<tr>
<td>47</td>
<td>I partner with staff to evaluate the alignment of teaching practices with research findings about RTI.</td>
</tr>
<tr>
<td>48</td>
<td>I provide staff members with research based evidence to support the use of various interventions.</td>
</tr>
</tbody>
</table>

A review of the content of these items (i.e., 29, 32, 33, 37, 38, 40, 41, 42, 43, 44, 45, 46, 47 and 48) revealed that they were all related to knowledge of and leadership support for Response to Intervention (RTI). In other words, these items were primarily focused on the leadership practices and actions of the principal in supporting interventions for students. The strength of the factor loadings and the number of items
(i.e., 14) loading onto factor one provided strong support for viewing factor one as an important dependent variable in the regression model aimed at answering my research questions.

Next, I used the same process and rationale to identify the constructs that factors 2, 3, and 4 were likely to measure. The items that loaded at .60 or above on factor 2 are listed in Table 2, those with similarly high loadings on factor 3 are listed in Table 3, and those with similarly high loadings on factor 4 are listed in Table 4.

Table 2

Factor Loadings for Component 2 of the PRISI

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Providing interventions to students is a key function of all classroom teachers.</td>
</tr>
<tr>
<td>12</td>
<td>Ensuring that the school has a system of intervention is a key function of the principal</td>
</tr>
</tbody>
</table>

Table 3

Factor Loadings for Component 3 of the PRISI

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>I am open to new ideas about intervention.</td>
</tr>
<tr>
<td>14</td>
<td>I enjoy trying new things in my school or classroom.</td>
</tr>
<tr>
<td>16</td>
<td>I feel strongly that schools should develop new ways to help struggling students</td>
</tr>
</tbody>
</table>
Table 4

*Factor Loadings for Component 4 of the PRISI*

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td><em>Frequent, formative assessment is important to students’ learning.</em></td>
</tr>
<tr>
<td>3</td>
<td><em>Students’ response to intervention provides information about their skill levels.</em></td>
</tr>
</tbody>
</table>

As shown in Table 2, only two items had factor loadings of .60 or above on Factor 2. Item 11 measured principals’ agreement with the claim that providing intervention to students is a key function of a classroom teacher. Item 12 measured principals’ agreement with the claim that ensuring that the school has a system of intervention is a key role of the principal. Both items related to the centrality of interventions to educators’ roles.

Whereas these beliefs might be important and distinct from the practices included in Factor 1, their contribution as a second dependent variable was not evident. First only two items loaded on the factor, and second the factor explained a very small percentage of overall variance. These findings led me to decide not to incorporate this factor as a second dependent variable.

Similar reasoning informed my determinations to omit Factors 3 and 4 from the actual study. With respect to Factor 3, I found that only three items had factor loadings of .60 or above (Items 13, 14, and 16) (See Appendix I). Item 13 related to personal openness to new ideas about intervention. The factor loading for item 13 was .71. Item 14
concerned educators’ enjoyment of trying new things “in my school or classroom.” The factor loading for item 14 was .79. Item 16 focused on the belief that the school should develop new ways to help struggling students. The factor loading for item 16 was .64. The content of items 13 and 14 was similar and specifically focused on openness to innovations. The content of item 16 was somewhat similar to that of items 13 and 14 in that it focused on support for developing new ways to help struggling students. All three items were connected by the word “new”—a circumstance suggesting that they might all focus on openness to change or novelty. Although openness to new practices might relate to Response to Intervention, its connection seems tangential. For this reason, I determined that Factor 3 would not constitute a dependent variable with relevance to the research questions guiding the study.

With respect to Factor 4, I found that only two items had factor loadings of .60 or above (Item 2 & 3). Item 2 concerned the belief that frequent, formative assessment is important to students’ learning. The factor loading for this item was .64. Item 3 focused on the belief that students’ responses to intervention provide information about their skill levels. The factor loading for item 3 was .65. These items both appeared to relate to the value of assessment—a concept that has limited relevance to my original construct, which was “Principals’ Receptivity to RTI.” Considering that the content of the items comprising this factor was tangential to the study and that the factor accounted for such a small amount of overall variance, I decided to omit this factor from the final instrument as well.
In light of the decisions I made regarding the limited value to my study of Factors 2, 3, and 4, I concentrated additional attention on Factor 1 only. The factor included a manageable number of items (i.e., 14) — all with relatively high factor loadings. These items could be combined to constitute a scale — one that I named, Leadership Support for Interventions for Students (LSIS). Using responses to the items comprising this scale, I next computed Cronbach’s alpha, which produced a reliability estimate of .93. This estimate suggested that the scale had a high level of internal consistency.

**Confirming the Applicability of the School Practices Survey**

Using the 512 responses from the pilot study, I performed a factor analysis with the items from Chandler’s (2000) *School Practices Survey* in order to determine if the factor structure that explained constructs inherent in the data from my respondents would be the same or different from the factor structure that Chandler reported using data from his validity studies. As mentioned in previous chapters, Chandler’s evidence suggested that the *School Practices Survey* produced a clear factor structure and high internal-consistency reliability.

Including the 10 items on Chandler’s scale, I ran a principal component analysis with varimax rotation. Chandler had reported that his analysis identified one strong factor, thereby justifying the creation of a single scale. The results of the factor analysis with data from my pilot study, however, seemed to suggest that the instrument actually incorporated two factors (See Appendix I). The first factor accounted for 38.2% of the overall variance in the data. Nine items loaded at least moderately on this factor, with loadings ranging between .54 and .74. The second factor explained 13% of the overall variance.
variance in the data. Four items loaded moderately on this factor, with loadings ranging between .42 and .54.

To determine which factors were likely to be significant, I used criteria offered by Stevens (1996, p. 372) suggesting that components with four or more variables loading at or above the .60 level (i.e., an absolute value of .60 or higher) are likely to be reliable irrespective of sample size, but that components with relatively low loadings can be interpreted when sample sizes are above 300. Component 1 had five items that loaded at levels above .60. Using Steven’s criteria, this factor seemed clearly to be significant. Component 2 had no items loading on it at levels above .60. But, with such a large sample size, there seemed to be some chance that it might be significant. Component 3 had just one item loading at a level above .60. It too might be viewed as interpretable because of the sample size. Another clue about the interpretability of the components came from the scree plot, which indicated a point of inflection between components 2 and 3. Using an on-line program for performing parallel analysis (http://ires.ku.edu/~smishra/parallelengine.htm), I also found that the first two components would likely be considered significant, while the third would not. The parallel analysis calculated eigenvalues from correlation matrices that were generated randomly based on sample size and number of variables. The actual eigenvalues calculated for factors in the data set were: 3.82 (factor 1), 1.31 (factor 2), and 1.06 (factor 3). The randomly generated eigenvalues for the first three hypothetical factors were: 1.22, 1.16 and 1.10 respectively. Whereas the first two actual eigenvalues exceeded those generated randomly via the simulation performed by the parallel analysis program, the
third did not. This finding suggests that the first two factors are likely to be reliable, but that the third is not likely to be reliable.

Based on the various determinations of factor reliability, I looked closely at the items that correlated most highly with the two interpretable factors. For this analysis, I used the rotated factor matrix so that I would have the greatest chance of discerning differences between the factors. First I looked at the six items that loaded on factor 1 (item 2 with a factor loading of .55, item 5 with a factor loading of .81, item 6 with a factor loading of .83, item 7 with a factor loading of .79, item 8 with a factor loading of .45, and item 9 with a factor loading of .71). Review of the content of these items (i.e., 2, 5, 6, 7, 8 and 9) indicated that they all were related to teacher-centered versus student-centered practices. In other words, these items distinguished between the belief that the teacher ought primarily to serve as an academic authority figure and the belief that the teacher ought primarily to serve as a facilitator or mentor.

Next, I looked at the four items that loaded on factor 2 (i.e., item 1 with a factor loading of .73, item 2 with a factor loading of .48, item 3 with a factor loading of .59, and item 4 with a factor loading of .77). Review of the content of these items indicated that they all were related to curriculum, in particular, standards-based curriculum. Because of its focus on curriculum and standards, this factor seemed to be measuring something that was outside of the scope of my study. Even though teachers might have been able to determine or at least interpret matters relating to curriculum when Chandler developed the scale, teachers no longer have that latitude. The adoption of the Common Core State Standards by 46 states (including Ohio) in 2010 has limited the autonomy teachers and
schools have to establish curriculum in alignment with their own preferences. As a result, items relating to curriculum no longer seem relevant to an instrument whose aim is to measure teacher-centered versus student-centered approaches to teaching. The factor results for the *School Practices Scale* (i.e., the unrotated and rotated factor matrices) are included Appendix H.

In consideration of this insight, I contacted Dr. Louis Chandler to get his permission to reconfigure the instrument to include only the items that measured teacher-centered versus student-centered instruction. Retaining only the six items relating to instructional practice (and eliminating those relating to curriculum) was a way to narrow the focus of the scale to matters over which teachers are still allowed to express and exercise a preference. In short, even though teachers no longer have much say over what they teach, they still have considerable control over how they teach. Expressing interest in my continuing work with his scale, Dr. Chandler responded positively to my request (see Appendix G).

To make sure that the six items measuring teacher-centered versus student-centered instructional practices had adequate internal consistency, I used Cronbach’s alpha. The calculation yielded a reliability estimate of .83. I also used diagnostics to determine if removal of any of the items would improve overall reliability and discovered that removing item 8 had this effect. Removing this item improved reliability slightly, to .84. With the aim of producing an efficient scale, I therefore chose to remove the item. The resulting scale had five items.
**Demographic Items**

The pilot survey contained six items that provided information about participants (Appendix B). The items asked the following questions:

1. How long have you been in your current position?
2. How many years of experience do you have in education?
3. If you have worked as a special education teacher, how long were you in that position?
4. What is your gender?
5. How many years of administrative experience do you currently have?
6. Highest degree earned?

The pilot study provided information regarding the formatting and clarity of these demographic items. After analyzing the responses to items 1, 2, 3, 4, 5, and 6, it became clear that the formatting of questions 1 and 5 needed to be revised. Items 1 and 5 provided participants with ranges for the years spent in their current position and as an administrator (See Appendix B). In order to ensure that responses to items 1 and 5 would provide the maximum amount of variability, I decided to use an open-ended response format that allowed respondents to supply the exact numbers of years respectively in their current positions and in administrative positions generally.

**Summary**

This chapter presented information regarding the processes I used to develop a scale to measure principals’ receptivity to (what later became leadership support for) RTI, to validate an existing scale for measuring instructional philosophy, and to develop
clear items eliciting information about principals. The chapter described the focus-group interview and pilot study that addressed these purposes.

The efforts reported in the chapter resulted in an instrument with three parts. The first part included the scale I called Leadership Support for Interventions for Students. It included 14 items with an Alpha reliability of .93. The second part included a five-item scale derived from Chandler’s (2000) School Practices Survey. Its internal consistency reliability was .84. The third part included six items to elicit information about responding principals (e.g., their gender, years of experience, and so on).
Chapter Five

Findings Responsive to the Study’s Research Questions

This study investigated the following research questions:

1. To what extent does the combination of middle school principals’ length of experience (as a principal and as a teacher); their experience as general educators, special educators, or both; and their instructional philosophy predict their receptivity to RTI?

2. To what extent is the length of middle school principals’ teaching experience associated with their receptivity to RTI?

3. To what extent is the length of middle school principals’ administrative experience associated with their receptivity to RTI?

4. To what extent is the experience of middle school principals’ as general educators, special educators, or both associated with their receptivity to RTI?

5. To what extent is the instructional philosophy of middle school principals associated with their receptivity to RTI?

Data Analysis: The Main Study

I began the data analysis process by exporting responses from the 283 respondents into SPSS. During this process I discovered an error that had significance for my ability to answer one of the research questions I originally posed. The error affected the ability of the study to provide information to answer research question #1, as originally formulated: *With school funding level included as a control variable, to what extent does the combination of middle school principals’ length of experience (as a principal and as
a teacher); their experience as general educators, special educators, or both; and their instructional philosophy predict their receptivity to RTI?

In order to answer this research question, I needed data about district funding levels (i.e., per pupil expenditures). I had planned to impute these data from an Ohio Department of Education data set. Without realizing the consequences of not imputing these data before sending the survey, I anticipated being able to impute the data after receiving responses to the survey. In other words, I was unaware that demographic information, like per pupil expenditures, needed to be front-loaded into the Qualtrics survey system.

When I discovered the problem, I attempted to access and use the computer IP addresses of respondents to link their locations to district-level data regarding per pupil expenditure. The process of looking up IP addresses for each respondent, however, did not provide accurate results. The IP addresses of principals had not, in most cases, originated from their school districts. Instead, most of the IP addresses were linked to personal computers and in some cases to computers connected to an educational service center server.

Considering the difficulty in deciphering the location of IP addresses, I was not able to create an accurate connection between the respondents and the districts where they were employed. As a result, I realized that the contextual variable, school funding level, would need to be dropped from the study. I then obtained agreement from my dissertation committee to adjust the first research question. The new question became: To what extent does the combination of middle school principals’ length of experience (as a
principal and as a teacher); their experience as general educators, special educators, or both; and their instructional philosophy predict their receptivity to RTI? With this modified research question in view, I completed the analyses needed to operationalize two variables in my study (see Chapter 4)—the measure of instructional philosophy (one of the study’s independent variables) and the measure of principals’ receptivity to RTI (the study’s dependent variable).

As discussed in Chapter 4, I constructed a new scale to measure the dependent variable because I could not find a published scale that focused on principals’ receptivity to RTI. Furthermore, the results of my pilot study provided a strong rationale for modifying the construct itself as well as the instrument measuring it. The modified instrument ended up including the 14 items from the original instrument (the PRISI) that measured leadership support for RTI. I called the instrument for measuring this more focused construct, the Leadership Support for Intervention for Students (LSIS). All 14 items on the instrument had the same valence, with the highest possible score being 5 (strongly agree) and the lowest possible score being 1 (strongly disagree).

Because all of the items on the LSIS had the same valence, I did not need to reverse code any items once all of the responses had been downloaded to SPSS. I simply summed the ratings on all 14 items to obtain a total score. The highest possible total score was 70, and the lowest possible total score was 14. Considering the valence of the individual items, the total score worked in such a way that the higher the score, the stronger the level of leadership support for RTI.
After computing total scores on the LSIS, I turned attention to preparing the independent variables for use in the regression model. Using the modified version of Chandler’s scale, I summed responses to all items to create an overall measure of instructional philosophy (conceptualized along the continuum from teacher-centered to student-centered). As was the case with the LSIS, all of the items included on Chandler’s scale had the same valence, so I did not need to reverse code any items.

With respect to “experience as a regular educator,” “experience as a special educator,” and “experience as both a general educator and a special educator,” I produced dummy variables in the following way. If a respondent included any number of years as a special educator in response to the question about years as a special educator, I assigned a value of “1” to the dummy variable, “experience as a special educator.” If the respondent indicated that he or she had no years of experience as a special educator, I assigned a value of “0” to that dummy variable. I then used the amount of overall experience variable, the amount of experience as a special educator variable, and the amount of experience as an administrator variable, to determine whether or not the respondent had years of experience as a general educator (beyond his or her administrative experience). In other words, I first subtracted the years of experience as an administrator from the overall years of experience, and then I subtracted the years of experience as a special educator from the difference value resulting from the first subtraction. If someone had a non-zero value resulting from these calculations, I assumed that those years were served in the role of non-administrative general educator. Finally, I constructed a dummy variable for “years of experience as both a general educator and a special educator” by determining whether
or not a person had both a non-zero value for years as a special educator and a non-zero value for the result of the difference calculation derived from the years of experience variables.

I did not need to perform computations to prepare the variables operationalizing principals’ length of experience as administrators and as teachers, respectively. The values in both cases were self-reported years of experience. They could be incorporated into the model as continuous independent variables.

**Descriptive statistics.**

I computed descriptive statistics for all of the variables in the model. With the variables relating to work as a general educator, special educator, or both, I computed frequency counts and percentages (see Table 5). The frequency outputs indicated that 53 of the principals (21.7% of valid responses) had experience exclusively as special education teachers. Twenty-nine principals reported having had experience as both a special education teacher and a general education teacher, comprising 11.9% of the valid responses. Finally, 214 principals reported experience as a general education teacher but not as a special education teacher, constituting the majority of responses (i.e., 86.6% of the valid responses).
Table 5

*Descriptive Table of Frequencies for experience as general, special educator or both*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td>Valid Percent Yes</td>
<td>Valid Percent No</td>
</tr>
<tr>
<td>Experience as a special educator</td>
<td>53</td>
<td>191</td>
<td>21.7</td>
<td>78.3</td>
</tr>
<tr>
<td>Experience as a general educator</td>
<td>214</td>
<td>33</td>
<td>86.6</td>
<td>13.4</td>
</tr>
<tr>
<td>Experience as both special and general educator</td>
<td>29</td>
<td>215</td>
<td>11.9</td>
<td>88.1</td>
</tr>
</tbody>
</table>

Next, I computed means and standard deviations for the following items on the survey: years in current position, years of experience in education, years of experience as a principal, length of time worked as a special education teacher, and years of administrative experience. I also computed skewness and kurtosis diagnostics for these variables. Although not all of these measures were used as continuous variables in the regression models, they did provide information about my respondent group. I report means and standard deviations for these measures in Table 6.
Table 6

*Descriptive Statistics for Demographic Information of the Survey*

<table>
<thead>
<tr>
<th>Item</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years in current Position</td>
<td>5.31</td>
<td>4.79</td>
</tr>
<tr>
<td>Years of Experience in Education</td>
<td>20.93</td>
<td>7.71</td>
</tr>
<tr>
<td>Years as a Principal</td>
<td>8.47</td>
<td>6.09</td>
</tr>
<tr>
<td>Length of time as Special Education Teacher</td>
<td>2.49</td>
<td>3.88</td>
</tr>
<tr>
<td>Years in Current Administrative Position</td>
<td>10.41</td>
<td>7.07</td>
</tr>
</tbody>
</table>

I also computed means and standard deviations as well as skewness and kurtosis diagnostics for each of the five items on the *School Practices Scale* and for the overall summed *School Practices* score. Means and standard deviations for each item and for the total score appear below in Table 7. I report skewness and kurtosis statistics in Appendix K.
Table 7

*Descriptive Statistics for School Practices Items 1-5*

<table>
<thead>
<tr>
<th>Item</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 1 (Assessment (Norm-ref. vs. Portfolio)</td>
<td>3.09</td>
<td>1.13</td>
</tr>
<tr>
<td>Item 2 (Teacher as Instructor vs. Facilitator)</td>
<td>3.93</td>
<td>1.02</td>
</tr>
<tr>
<td>Item 3 (Teacher centered instruction vs. Student led)</td>
<td>4.10</td>
<td>.90</td>
</tr>
<tr>
<td>Item 4 (Individual teaching vs. Inter-disciplinary teams)</td>
<td>3.64</td>
<td>1.20</td>
</tr>
<tr>
<td>Item 5 (Regular Instructional Periods vs. Flexible Blocks)</td>
<td>3.71</td>
<td>1.27</td>
</tr>
<tr>
<td>Total Score</td>
<td>18.51</td>
<td>4.36</td>
</tr>
</tbody>
</table>

In addition I computed means and standard deviations as well as skewness and kurtosis diagnostics for each of the 14 items comprising the LSIS and for the overall summed LSIS score. Means and standard deviations appear below in Tables 8, and skewness and kurtosis measures are reported in Appendix K.
Table 8

Descriptive Statistics for LSIS Items 1-14

<table>
<thead>
<tr>
<th>Item</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 1 (I have observed students grow through RTI)</td>
<td>4.06</td>
<td>.71</td>
</tr>
<tr>
<td>Item 2 (I am very familiar with RTI)</td>
<td>4.22</td>
<td>.83</td>
</tr>
<tr>
<td>Item 3 (I have attend professional development for RTI)</td>
<td>4.13</td>
<td>.89</td>
</tr>
<tr>
<td>Item 4 (I make RTI a priority in my school)</td>
<td>4.12</td>
<td>.80</td>
</tr>
<tr>
<td>Item 5 (I provide prof. development time focused on RTI)</td>
<td>3.93</td>
<td>.78</td>
</tr>
<tr>
<td>Item 6 (I create opportunities for collaboration between general education &amp; special education teacher)</td>
<td>4.30</td>
<td>.74</td>
</tr>
<tr>
<td>Item 7 (I provide resources to support staff in sustaining RTI)</td>
<td>4.01</td>
<td>.72</td>
</tr>
<tr>
<td>Item 8 (I coordinate meetings with staff to discuss interventions for students)</td>
<td>4.28</td>
<td>.66</td>
</tr>
<tr>
<td>Item 9 (I communicate regularly with staff about the importance of providing interventions for all learners)</td>
<td>4.10</td>
<td>.76</td>
</tr>
<tr>
<td>Item 10 (I provide additional time to enable staff to implement interventions)</td>
<td>3.85</td>
<td>.88</td>
</tr>
<tr>
<td>Item 11 (I am involved in the planning of interventions in my school)</td>
<td>4.02</td>
<td>.83</td>
</tr>
<tr>
<td>Item 12 (I lead intervention initiatives in my school)</td>
<td>3.80</td>
<td>.82</td>
</tr>
<tr>
<td>Item 13 (I partner with staff to evaluate the alignment of teaching practices with research findings)</td>
<td>3.75</td>
<td>.74</td>
</tr>
<tr>
<td>Item 14 (I provide staff members with research based evidence to support the use of various interventions)</td>
<td>3.79</td>
<td>.74</td>
</tr>
<tr>
<td>Total Score</td>
<td>56.44</td>
<td>7.39</td>
</tr>
</tbody>
</table>

These diagnostic tests indicated that responses to the items on the LSIS were negatively skewed (See Figure 6). In other words, the preponderance of responses
indicated agreement or strong agreement with the statements presented as the items on the LSIS. Not only does skewness limit variance, it might also be an indication of social desirability bias.

Figure 6. LSIS Histogram of Descriptive Statistics.

A negative skew can be observed in the responses to the School Practices items as well (See Figure 7). Again, the preponderance of responses to the items on the instrument showed levels of strong agreement or agreement. Social desirability bias might explain why so many respondents gave positive answers to the items on the Schools Practices Scale. Of course, it is certainly possible that most of the respondents actually did support child-centered rather than teacher-centered approaches to education.
Reliability estimates.

I calculated a Cronbach’s alpha reliability estimate for the School Practices Scale, with a resulting internal-consistency reliability of .85. This calculation was similar to the reliability estimate that Chandler reported (i.e., .86) and also similar to the reliability estimate I obtained using data from my pilot test of the instrument (i.e., .83). Next, I calculated the alpha reliability of the LSIS, yielding an internal-consistency reliability of .91. This result is similar to the reliability estimate I obtained using data from the pilot test of the instrument (i.e., .93).
Bivariate associations.

I calculated the following bivariate analyses: 1) correlations between each independent variable and each other independent variable and 2) correlations between each independent variable and the dependent variable.

The first set of analyses (independent variable to independent variable) allowed me to verify that multicollinearity would not be likely to compromise the regression model. The second set of bivariate analyses (independent variable to dependent variable) provided important preliminary information about the associations that might become salient in the full regression model, and they provided answers to research questions #2 through #5. When these bivariate correlations were calculated using continuous variables, I reported them as Pearson Product Moment correlations, and when they were calculated using one categorical variable and one continuous variable, I reported them as point-biserial correlations. In practice, however, SPSS uses the same algorithm for calculating both.

As shown in Table 9, the bivariate analyses using the independent variables only revealed that years as a teacher was significantly and negatively correlated with years as a principal. The Pearson Correlation for these two independent variables was -.23. The independent variable, overall years as a teacher also produced a positive and significant correlation with the independent variable, experience as both a special and general educator. In this case the point bi-serial correlation was .14. The independent variable, experience as a special educator and the independent variable, experience as a general educator produced a significant negative correlation of -.52. Additionally, the variable,
experience as a special educator and the variable, experience as both a general and special educator had a positive, significant correlation of .67.

Table 9

*Bivariate Correlations of the Independent Variables*

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Years as a Teacher</th>
<th>Years as a Principal</th>
<th>Exp. as a special educator</th>
<th>Exp. as a general educator</th>
<th>Exp. as both Sp./Gen. Educator</th>
<th>Continuum of Instructional Philosophy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years as a Teacher</td>
<td>Pearson</td>
<td>-.227**</td>
<td>.064</td>
<td>.119</td>
<td>141*</td>
<td>-.119</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>274</td>
<td>271</td>
<td>240</td>
<td>242</td>
<td>240</td>
</tr>
<tr>
<td>Years as a Principal</td>
<td>Pearson</td>
<td>-.227**</td>
<td>1</td>
<td>.068</td>
<td>-.010</td>
<td>-.063</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>271</td>
<td>277</td>
<td>241</td>
<td>244</td>
<td>241</td>
</tr>
<tr>
<td>Experience as a Special Educator</td>
<td>Point Bi-Serial</td>
<td>064</td>
<td>.068</td>
<td>1</td>
<td>-.518**</td>
<td>.666**</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>240</td>
<td>241</td>
<td>244</td>
<td>244</td>
<td>244</td>
</tr>
<tr>
<td>Experience as a General Educator</td>
<td>Point Bi-Serial</td>
<td>119</td>
<td>-.010</td>
<td>-.518**</td>
<td>1</td>
<td>.145</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>242</td>
<td>244</td>
<td>244</td>
<td>247</td>
<td>244</td>
</tr>
<tr>
<td>Experience as both Special and General Educator</td>
<td>Point Bi-Serial</td>
<td>.141*</td>
<td>-.063</td>
<td>.666**</td>
<td>.145</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>240</td>
<td>241</td>
<td>244</td>
<td>244</td>
<td>244</td>
</tr>
</tbody>
</table>

**Correlation is significant at the 0.01 level (2-tailed test).**
Next, I analyzed the bivariate associations between the independent variables (experience as a principal, experience as a general educator, experience as a special educator, experience as both a special and general educator, and instructional philosophy) and the dependent variable (leadership support for interventions for students). Again, the Pearson correlation was calculated and reported for the continuous variables of instructional philosophy, time spent as a teacher (experience), and time spent as a principal (experience). The point bi-serial correlation was reported for the categorical variables (reported as binaries, “yes” or “no”) of experience as a general educator, experience as a special educator, and experience as both (See Table 10).

The bivariate correlations between the independent variables and dependent variable produced three, significant correlations. First, the association between the independent variable, experience as a general educator and the LSIS total score produced a negative and significant correlation with a point bi-serial coefficient of -.23. The correlation between these variables showed that preparation as a general educator was a negative predictor of leadership support for interventions for students. Principals with experiences limited to the general education classroom tended not to be supportive of interventions for students. Additionally, the independent variable, instructional philosophy and the dependent variable, the LSIS total score showed a positive and significant correlation ($r = .21$). The positive correlation between these variables suggested that instructional philosophy was a predictor of LSIS, that is, that a student-centered instructional philosophy (a higher score on the Chandler scale) predicted a higher level of leadership support for interventions for students (a higher score on the
LSIS). In other words, principals who subscribed to a student-centered instructional philosophy tended to be more supportive of interventions for students than their counterparts who subscribed to a teacher-centered instructional philosophy. Finally, the overall years of teaching experience and the LSIS exhibited a significant and negative correlation, with a Pearson Correlation of -.16. This negative and significant correlation suggested that the overall years spent as a teacher was a negative predictor of LSIS. Principals who had more experience (duration of years) as teachers were less supportive of leading interventions for students than their counterparts with fewer years of experience as teachers.

With a Pearson correlation of .049, the independent variable, years spent as a principal (experience) and the dependent variable, LSIS total score did not yield a significant correlation (positive or negative). With a point bi-serial correlation of .13, the independent variable, experience as a special educator and the dependent variable, LSIS total score did not yield a significant correlation (positive or negative). Additionally, the independent variable, experience as both a general and special educator and the dependent variable, LSIS total score did not yield a significant correlation (positive or negative).
Table 10

*Bivariate Correlations between the Dependent and Independent variables*

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>N</th>
<th>Pearson/Point Biserial Calculation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years as a Teacher</td>
<td>256</td>
<td>-.161**</td>
</tr>
<tr>
<td>Years as a Principal</td>
<td>259</td>
<td>.049</td>
</tr>
<tr>
<td>Experience as a General Educator</td>
<td>231</td>
<td>-.226**</td>
</tr>
<tr>
<td>Experience as a Special Educator</td>
<td>228</td>
<td>.126</td>
</tr>
<tr>
<td>Experience as Both (Sp/Gen Ed.)</td>
<td>228</td>
<td>.004</td>
</tr>
<tr>
<td>Continuum from teacher centered (low score) to student centered (high score) instructional philosophy</td>
<td>254</td>
<td>.210**</td>
</tr>
</tbody>
</table>

**Correlation is significant at the 0.01 level (2-tailed)

**Regression analysis.**

The regression analysis for this study was conducted in two parts. This first part of the analysis used a direct entry model. The second part—an ancillary analysis—used a stepwise model.

First, I constructed an ordinary least square, direct entry regression model with the LSIS total score as the dependent variable. The independent variables included in the model were: instructional philosophy, years as a principal, years as a teacher, experience as a general educator, and experience as a special educator. The variable, experience as both a special educator and a general educator was omitted from the model in order to keep from introducing a multicollinearity threat.
Results from this analysis are presented in Table 11. The model was statistically significant and explained 11% of the overall variance in the dependent variable. The model indicated that instructional philosophy of the principal (with a positive Beta weight of .203) had the strongest association with the LSIS score. Additionally, the model showed that principals who had worked exclusively within the silo of the general education classroom had lower LSIS scores (Beta weight of -.177). Lastly, the model revealed that the overall years that principals had spent as teachers was negatively associated with their LSIS scores (Beta weight of -.138).

Table 11

Direct Entry Regression Model

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>SE</th>
<th>β</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparation as special educator</td>
<td>.448</td>
<td>1.290</td>
<td>.026</td>
</tr>
<tr>
<td>Preparation as a general educator</td>
<td>-3.755</td>
<td>1.623</td>
<td>-.177</td>
</tr>
<tr>
<td>Years as a teacher</td>
<td>-.187</td>
<td>.090</td>
<td>-.138</td>
</tr>
<tr>
<td>Years as principal</td>
<td>.047</td>
<td>.078</td>
<td>.040</td>
</tr>
<tr>
<td>Instructional philosophy</td>
<td>.335</td>
<td>.107</td>
<td>.203</td>
</tr>
</tbody>
</table>

Notes: $r^2 = .11$ (p < .05)

As an ancillary analysis, I also developed a stepwise regression model. Results from this analysis are presented in Table 12. The stepwise regression model included all of the same independent variables as I had included in the direct entry model with the addition of another variable, gender. I had collected data on gender through an item on the survey in order to check for a balance in representation of male and female
respondents. According to the frequency outputs, there were 153 males (53.9%) and 127 females (44.7%) who responded to the survey. The data represented a reasonable gender balance. Because I had these data available, I also thought it would be useful to see if gender explained variance in LSIS scores.

The Stepwise Regression Model supported my initial direct entry analysis and interpretation of the data. Because the entry of variables was computer generated rather than based on direct entry from the list of variables, there were slight variations in output. In addition, gender turned out to be a significant predictor of LSIS scores. The stepwise regression added variables in four steps. It added gender first, years as a teacher second, instructional philosophy third, and experience as a general educator fourth. With each step, the R-square value increased, from .09 to .13, .15, and .16, respectively.

Next, in order to determine the contribution of each independent variable, I examined its Beta weight (See Table 12).

Table 12

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
<td>.292&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.356&lt;sup&gt;b&lt;/sup&gt;</td>
<td>.382&lt;sup&gt;c&lt;/sup&gt;</td>
<td>.405&lt;sup&gt;d&lt;/sup&gt;</td>
</tr>
<tr>
<td>Adjusted R Square</td>
<td>.081</td>
<td>.119</td>
<td>.134</td>
<td>.148</td>
</tr>
<tr>
<td>$R^2$ (p &lt; .05)</td>
<td>.09</td>
<td>.13</td>
<td>.15</td>
<td>.16</td>
</tr>
</tbody>
</table>
The model confirmed the significant contributions of the independent variables of instructional philosophy, experience as a general education teacher, and overall years spent as a teacher. And it showed that gender was also a predictor of LSIS. Female principals were more likely than male teachers to report using practices that supported interventions for struggling students.

I also used part and partial correlations and multicollinearity diagnostics to ensure that various threats (e.g., multi-collinearity, suppressor effects) were not influencing the patterns of association. I saw no evidence that these threats were compromising the accuracy of the findings, as reported in the regression tables.

**Answers to the research questions.**

Both the bivariate associations and the multiple regression models supplied data that enabled me to answer the research questions guiding this study. The research questions and the answers the findings support are presented below:

1. To what extent does the combination of middle school principals’ length of experience (as a principal and as a teacher); their experience as general educators, special educators, or both; and their instructional philosophy predict their receptivity to RTI? The analysis permitted me to answer this question in the affirmative. The combination of variables did have a significant association with leadership support for interventions for students (LSIS—the construct that replaced the original construct, receptivity to RTI). In terms of specific variables that contributed to the overall explained variance, the analysis produced no significant relationship between the length
or principals’ administrative experience and their support for interventions for students. It revealed that the length of time spent as a classroom teacher (overall years as a teacher) had a significantly negative relationship to leadership support for interventions for students. The longer the experience, the lower the LSIS reported by principals. The regression analysis yielded a negative and significant relationship between general education experience and principals’ leadership support for interventions for students. Principals with experience only in the general classroom reported lower levels of leadership support for interventions for students. The regression model revealed a significant positive relationship between student-centered instructional philosophy and leadership support for interventions for students. Principals who reported having a student-centered philosophy also reported stronger leadership support for interventions for students.

2. To what extent is the length of middle school principals’ teaching experience associated with their receptivity to RTI? The correlation analysis revealed a negative and significant relationship between length of time spent as a classroom teacher and leadership support for interventions for students. As the years of experience in a classroom increased, the principals’ reported leadership support for interventions decreased.

3. To what extent is the length of middle school principals’ administrative experience associated with their receptivity to RTI? The zero-order correlation showed no significant relationship (positive or negative) between the length or
principals’ administrative experience and their leadership support for interventions.

4. To what extent is the experience of middle school principals’ as general educators, special educators, or both associated with their receptivity to RTI? The correlation analysis revealed a negative and significant relationship between principals’ experience as general educators and leadership support for interventions for students.

5. To what extent is the instructional philosophy of middle school principals associated with their receptivity to RTI? The bi-variate correlation revealed a positive and significant relationship between principals’ instructional philosophy as student-centered and leadership support for interventions for students.

Summary

This chapter presented the findings addressing the research questions posed by this study. The original research questions were as follows:

1. To what extent does the combination of middle school principals’ length of experience (as a principal and as a teacher); their experience as general educators, special educators, or both; and their instructional philosophy predict their receptivity to RTI?

2. To what extent is the length of middle school principals’ teaching experience associated with their receptivity to RTI?
3. To what extent is the length of middle school principals’ administrative experience associated with their receptivity to RTI?

4. To what extent is the experience of middle school principals’ as general educators, special educators, or both associated with their receptivity to RTI?

5. To what extent is the instructional philosophy of middle school principals associated with their receptivity to RTI?

Because of the change in the dependent variable from the original scale, the PRISI to the revised scale, the LSIS, these original research questions could be reframed slightly. For example, the first question might be reframed as follows: original research questions were as follows: To what extent does the combination of middle school principals’ length of experience (as a principal and as a teacher); their experience as general educators, special educators, or both; and their instructional philosophy predict their leadership support for interventions for students?

As the findings from the study showed, this research question could be answered affirmatively. Taken together, the independent variables were significant predictors of scores on the LSIS. The independent variables that were significant predictors in the regression models were also significantly correlated (via zero-order correlation) with LSIS scores. These variables were: (1) principals’ instructional philosophies, (2) their year of experience as teachers, and (3) their experience as general educators. An ancillary analysis using stepwise regression also showed that gender was a significant predictor of LSIS scores.
Chapter Six

This chapter reviews the study’s major findings in the context of related literature. It examines the evidence produced by the study and contextualizes it in relation to findings from earlier studies with a similar focus. This discussion clarifies the degree to which these findings—both from the current study and other related studies—can inform school leadership practice and education policy. Based on evidence with strong support, the chapter offers recommendations for practical action. It concluded by recommending additional studies within the same domain as well as by disclosing limitations resulting from difficulties with data collection and analysis.

Brief Overview of the Findings

This section reviews the study’s research questions and positions its major findings in relationship to prior literature. As a reminder for readers, the dependent variable initially to formulate these questions changed due to refinements made to the instrument following the pilot test. As discussed in Chapter 4, what had once been the Principals’ Receptivity to Interventions for Students (PRISI)—an instrument intended to measure principals’ receptivity to RTI—became the Leadership Support for Interventions for Students (LSIS), which measures the extent to which principals engage in practices that are supportive of RTI.

The first research question.

After the instrument’s refinement noted above—replacing the construct “receptivity to RTI” with the construct “leadership support for RTI” —the first research question was revised to read, “To what extent does the combination of middle school
principals’ length of experience (as a principal and as a teacher); their experience as
general educators, special educators, or both; and their instructional philosophy predict
their leadership support for RTI?” The study’s regression analysis provided two answers
to this question. First, there was an overall significant association between leadership
support for RTI and the combination of independent variables. Second, based on the
overall R-squared statistic, these independent variables explained 11% of the variance in
middle school principals’ leadership support for RTI.

The second research question.

After replacing the wording of the dependent variable, the second research
question became, “To what extent is the length of middle school principals’ teaching
experience associated with their leadership support for RTI?” The bivariate analysis
showed a significant negative association (Pearson correlation of -.16) between the
overall years that principals had previously spent teaching and their leadership support
for RTI. In other words, the principals with more teaching experience reported being less
supportive of RTI.

The third research question.

The revised third research question was, “To what extent is the length of middle
school principals’ administrative experience associated with their leadership support for
RTI?” With respect to this variable, the bivariate analysis did not show a significant
association between middle school principals’ administrative experience and their
leadership support for RTI.
The fourth research question.

The revised version of the fourth research question was, “To what extent is the experience of middle school principals’ as general educators, special educators, or both associated with their leadership support for RTI?” The bivariate analysis showed a significant negative association (point bi-serial correlation of -.23) between principals’ experience exclusively as general education teachers and their leadership support for RTI. The principals with more work experience as general education teachers were less likely to support RTI.

The fifth research question.

The fifth revised research question was, “To what extent is the instructional philosophy of middle school principals associated with their leadership support for RTI?” The bivariate analysis showed a significant positive association (Pearson correlation of .21) between principals’ education philosophies and their leadership support for RTI. Principals with a student-centered education philosophy reported being more supportive of RTI than those with teacher-centered philosophies.

Discussion of the Findings

This study found significant relationships between the following independent variables and the dependent variable of Principals’ Leadership Support for Interventions for Students (LSIS):

1. Principals’ experiences as general education teachers had a significantly negative on their LSIS.
2. The total time that principals spent as classroom teachers had a significantly negative impact on their LSIS.

3. There was a significantly positive relationship between principals with student-centered education philosophies and their support for LSIS.

This section examines the study’s contributions to related literature on principals’ support for interventions as well as their attitudes toward including students with disabilities. It also explores contributions relating to the association between prior experiences as special or general educators and principals’ support for interventions and the association between principals’ education philosophies and their support for interventions. The relevant findings are presented in Table 14.
Table 13

Relevant Studies Table

<table>
<thead>
<tr>
<th>Relevant Findings</th>
<th>Research That Supports Findings</th>
<th>LSIS Study’s Findings</th>
<th>Yes/No, Similar, or Different</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education philosophy predicts teaching practices.</td>
<td>Smith, 2008; Glickman, Gordan, &amp; Ross-Gordan, 2005; Chandler, 2002; Levine &amp; Lezotte, 1990</td>
<td>Philosophy predicts LSIS.</td>
<td>Yes</td>
</tr>
<tr>
<td>General education teachers are less supportive of including special education students.</td>
<td>Daane, Beirne-Smith, &amp; Latham, 2000</td>
<td>Experience in the general education silo predicts LSIS.</td>
<td>Yes</td>
</tr>
<tr>
<td>Experience with special education students and training predict attitudes towards inclusion.</td>
<td>Idol, 2006; Leatherman &amp; Niemeyer, 2005; Dickens-Smith, 1995; Hirth &amp; Valesky, 1991</td>
<td>Experience as a special education teacher, outside the general education silo, predicts LSIS.</td>
<td>Yes</td>
</tr>
<tr>
<td>Younger teachers have more positive attitudes towards including students with disabilities.</td>
<td>Day, Sammons, Stobart, Kington, &amp; Gu, 2007; Deal, 2007; Kern, 2006; Bolman &amp; Deal, 2003; Heifetz &amp; Linsky, 2002</td>
<td>Principals with less classroom experience are more positive with regard to LSIS.</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Leadership support for interventions and previous research on inclusion.

The research on educators’ attitudes towards students with disabilities, in general and inclusion, in particular provided a context for this study. As presented in Chapter 2, the related body of research is growing and is somewhat contradictory; yet, connections can be made between this LSIS study and earlier research regarding teacher and principal attitudes towards intervention (and the related practice, inclusion). First, the LSIS study findings are negatively skewed in that principals predominately responded in either
strong agreement or agreement with statements indicating that they provided leadership support for interventions. This negative skew is commensurate with previous research indicating that educators generally support the inclusion of students with disabilities. An overview of earlier studies shows the following: (1) educators who have had positive experiences with special education students and with inclusion tend to be more positive about inclusion, (2) professional preparation for working with students with disabilities also appears to be associated with positive attitudes, (3) educators with greater levels of collegial and administrative support tend to be more positive about inclusion, and (4) educators consider adequate resources to be a necessity for having positive attitudes toward inclusion (Dickens-Smith, 1995; Hirth & Valesky, 1991; Idol, 2006; Leatherman & Niemeyer, 2005; Osgood, 2007; Rodriguez et al., 2012).

As reported elsewhere and summarized in Table 14, the LSIS study’s findings—most of which are supported by earlier research—demonstrate that education philosophy, experience as a general classroom teacher, and overall experience as a teacher are predictors of principals’ support for intervention. Among the findings, the association between principals’ instructional philosophies and their support for intervention represents a new contribution to the literature.

**Principals’ experience as a general or special education teacher.**

In the LSIS study, principals whose previous experience was limited to the general classroom reported less support for the practice of providing interventions to struggling students. This finding suggests that principals who have transitioned from the general education silo are less likely to support RTI than those with experience as special
education teachers. A possible explanation could be that principals who have emerged from general education classrooms might not have the requisite background, experience, or familiarity with the RTI process to implement, lead, and support interventions sufficiently. Another possibility is that these principals have not adapted their mindsets from the general education philosophy, with its focus on standardization to one that is more accepting of individual differences. As some suggest, these principals may even see the entire school environment as if it were just one large general-education classroom (Daane, Beirne-Smith, & Latham, 2000).

Earlier research indicates that teachers and administrators with special education experience feel positively about their involvement with special education and inclusive instruction (Praisner, 2003). These studies also show that special education experience predisposes principals to understand and to support interventions and students with special needs in an inclusive environment (i.e. least restrictive) Sage & Burrello, 1994; Valesky & Hirrh, 1992; Villa, Thousand, Meyers, & Nevin, 1996). Praisner (2003) observes that principals’ training and experience influence their receptivity to inclusive models of instruction.

The LSIS study shows that principals with greater experience working with students with disabilities are more receptive than other principals to interventions for struggling students. RTI and special education are closely aligned and involve practices that would be very familiar to a principal who once worked in special education. General education teachers who become principals might not have this same level of familiarity and understanding.
The significant negative relationship found in the LSIS study between principals’ experience as general education teachers and leadership support for interventions is commensurate with earlier research. For instance, Praisner (2003) has shown that principals’ past experience and relevant training correlate positively with their attitudes. Additionally, Livingston, Reed, and Good (2001) surveyed 68 principals in rural southern Georgia regarding attitudes toward placement options for students with severe learning disabilities. Their research suggests that experience is the most significant factor in predicting principals’ attitudes toward inclusion. In their study, principals who previously had worked with students with severe disabilities were more open to placing these students in less restrictive settings. In another example, Short and Martin (2005) investigated teachers’ attitudes toward inclusion in a rural K-12 high school. In their study, general classroom teachers were more negative about inclusion, pointing to their limited experience with special education students and staff. In this same study, special education teachers had purposely placed their students in positive and caring teachers’ classrooms to alleviate feelings of rejection.

Overall, this body of research is limited and lacks specific findings on the impact of general education experience on inclusive instructional practices. Most of these studies feature a combination of predictor variables, including experience, initial teacher preparation, administrative support, professional development, collaboration, resources, and staffing levels (Idol, 2006; Stainback & Stainback, 1988; Villa et al., 1996); however, based on the overall findings, the most important variables are associated with training

Findings from the LSIS study fit with findings from earlier studies that identified training and experience as predictors of attitudes towards special education, specifically inclusion. Possible explanations could be that principals with experience as special education teachers are better prepared to support and lead student interventions. Principals who previously created student intervention plans as teachers might be far more likely to prioritize the leadership and support of these interventions in their own school buildings. In other words, principals with special education backgrounds might be extending their earlier classroom work to an entire school. Additionally, former special education teachers have a working knowledge of RTI and its critical components—a key factor because principals must be involved in all phases of the process (Shepard & Salembier, 2011).

**Overall experience as a teacher.**

The LSIS study’s full regression analysis identified a significant negative relationship between the principals’ length of experience as teachers and their leadership support for interventions. In other words, principals with more experience as teachers, regardless of the classroom type (e.g., general or special education), were less likely to support interventions in their own schools.

These findings are commensurate with other research on experience and age in relation to the change process. Previous studies demonstrate that older educators are less receptive than younger ones to change (Bolman & Deal, 2003; Deal, 2007). Experience
itself, coupled with the aging process, could diminish openness to innovations and new ideas (Bolman & Deal, 2003; Day, Sammons, Stobart, Kington, & Gu, 2007; Deal, 2007). The literature indicates that, overall, older people have more difficulty with the change process than their younger colleagues (Day et al., 2007; Deal, 2007).

In 2006, Kern surveyed 77 special education and general education teachers regarding their attitudes towards inclusion. The study sought to determine if teachers’ attitudes varied based on their gender, age, education, grade level taught, or special education courses taken. The findings show that younger teachers (especially those under age 36) have more positive attitudes toward inclusion. Other factors include the amount of professional training and experience working with students with disabilities, the level of administrator support, and the availability of resources.

These findings support findings from the LSIS study, which, although it did not address age specifically, did examine experience. It is logical to assume that experience and age increase simultaneously—every year added to one’s experience also adds to a person’s age. Additionally, these variables (for the purposes of this study) increase at the same interval (years). As noted, the more experience a principal has had as a teacher the lower is his or her score on the LSIS.

The question is, “Why?” A possible explanation could be that the more time a principal has spent in the classroom, the less likely is he or she to believe in the efficacy and effectiveness of student interventions. It could be that in this case, experience is a double-edged sword. Perhaps principals who have spent more time as teachers are wearing “the thick skin of experience,” which Heifetz and Linsky (2002) define as a
resistance to change. Principals with more years of classroom experience might be less supportive of intervention because they are more reluctant to change their practices and often are older, which again makes them more resistant to change. It is possible that younger principals with less experience might have more energy and eagerness to support the RTI process even though it is complex and its adoption by a school entails a significant amount of change.

**Principals’ instructional philosophies.**

An educator’s philosophy provides the foundation for decisions about instruction and the practices those decisions support (Cranton, 1998; Gailbraith, 1999; Noddings, 1998; Smith, 2008; Glickman, Gordon, & Ross-Gordan, 2005) and might also influence school leadership practices (Levine & Lezotte, 1990). Education philosophy influences what will be taught, how it will be taught, how learning will be assessed, and how assessment results will be interpreted (Kumar, 2006).

The LSIS study’s full regression analysis revealed a significant positive relationship between principals’ student-centered education philosophies and strong leadership support for intervention. Principals who reported having a student-centered instructional philosophy also reported strong support for intervention. This finding fits with the research on instructional or instructional philosophy as a predictor of classroom and leadership practices.

Earlier research findings suggest that instructional philosophy affects teachers’ and principals’ practices (Smith, 2008; Glickman et al., 2005; Levine & Lezotte, 1990). Commensurate with these findings, the LSIS findings revealed that principals whose
instructional philosophies were closer to the student-centered pole of the continuum were more supportive of interventions than those whose instructional philosophies were closer to the teacher-centered pole of the continuum. This finding expands on earlier literature by connecting instructional philosophy to a practice (i.e., RTI) that explicitly provides support to students with disabilities and other struggling students. Whereas earlier literature showed that educators with student-centered philosophies tended to be more relationship-oriented than their teacher-centered peers and to use more “progressive” instructional methods (Smith, 2008; Levine & Lezotte, 1990), this earlier work did not focus on RTI in particular.

**Implications for Further Research**

The LSIS study provides a potential foundation for additional inquiry into certain variables that might influence principals’ support for interventions. This section suggests potential research opportunities and implications for additional inquiry.

First, the LSIS scale could be used as a basis for studies with one or more contextual variables that could predict principals’ leadership support for interventions.. The study’s design focused specifically on the personal characteristics and experiences of principals—variables that researchers typically characterize as endogenous. Future research, by contrast, might focus on exogenous variables that contribute to principals’ support for interventions or a combination of endogenous and exogenous variables.

A possible avenue for additional research in this area would be to include a contextual variable, such as schools’ financial resources. It is important to note that the original design of the study incorporated one exogenous independent variable, namely
level of school resources operationalized as district per pupil expenditures. An error associated with the use of an on-line survey tool kept this variable from properly linking up with survey responses, so the analyses constructed for this study omitted information about per pupil expenditures. Nevertheless, a considerable body of research has shown that limited financial resources often function as an impediment to the adoption of education reforms (Imazeki & Reschovsky, 2005; Sage & Burrello, 1994; Toutkoushian & Michael, 2008). As with other reforms, the adoption of RTI requires resources. Schools that lack sufficient resources might be unable to provide sufficient support to staff (e.g., professional development) or instructional materials to enable their educators to implement this particular reform (Wright, 2001). As such, studies should be conducted to examine whether or not resource limitations at the school or district level might influence principals’ support for interventions.

Another study that might build on findings from the LSIS study would examine the influence of other school characteristics on principals’ support for interventions. For instance, by identifying the percentage of students receiving federal funding through the free and reduced-price lunch programs, a researcher could use a community’s socioeconomic status as an independent variable. Other potential independent variables could include demographic information or designations of districts as urban, rural, or suburban. For example, a rural school district might have a homogenous student population (e.g., with few English Language Learners) and therefore might not need as complex an RTI model as an urban district would.
Student enrollment is another contextual variable worth consideration. Enrollment has an influence on many school conditions: staffing, facilities, schedules, resources, and even student achievement. Many districts are growing rapidly, others are stagnant with a stable enrollment, while yet others are battling declining enrollment and an exodus of students. All of the circumstances affecting enrollment (or enrollment changes) might possibly influence principals’ support for interventions, particularly if they implicate the complexity of the schooling enterprise for which principals are responsible.

**Implications for Practice**

The findings of this LSIS study and the scale developed to conduct the research have implications for practice. First, the LSIS survey could be employed for different purposes. For instance, current or aspiring school leaders could complete the survey as an inquiry-based learning opportunity to guide their professional learning. Districts also could distribute the survey as a way to encourage administrators to reflect on their experience, education philosophies, and leadership support for interventions. In doing so, principals could develop individualized professional development plans (IPDP) to support additional experience or training in RTI or special education leadership to foster continued growth. This approach would allow districts to differentiate their professional development opportunities because each principal’s or aspiring principal’s learning path would be derived from self-reflection and self-identified areas for growth based on the survey results. The districts could then initiate and monitor refinement plans to help school leaders better implement student interventions.
The finding that principals’ student-centered education philosophies have a positive impact on LSIS could have implications for districts’ hiring processes. The modified School Practices Survey, which contains five items on instructional philosophy, could be used as part of the principal selection process. Districts could incorporate these questions into existing interview protocols to get a sense of each candidate’s preference for more student-centered or more teacher-centered practices. Some districts do not use any type of screening device to help determine a candidate’s education philosophy. These findings suggest that hiring committees and school personnel might consider using the School Practices scale (Chandler, 2002) and/or the LSIS survey (or items from these scales) as a part of their interview and hiring processes.

As noted, this study illustrates that principals whose prior teaching experience was limited to general education are less likely to provide LSIS, suggesting potential differences in the fundamental teaching practices underpinning special education and general education. With this finding in view, general education teachers might want to expand their own perspectives by acquainting themselves with the fundamental practices and strategies used by special education teachers. They might also consider experimenting with true co-teaching models, which have been growing in popularity; and they certainly might want to include special education teachers in any planning they undertake in preparing to implement interventions for struggling students. This type of collaboration can make general education teachers more aware of the critical practices needed to support students with disabilities as well as other students with unusual
learning needs. In doing so, they will not only become more competent in the teaching role, they will also be better prepared to support interventions if they become principals.

**Implications for Districts and Principal Preparation Programs**

A number of practices that are responsive to the findings from this study might help districts and principal preparation programs foster more positive attitudes toward Response to Intervention. These practices also implicate educators’ attitudes toward students with disabilities and their support for the inclusion of students with disabilities in general education settings.

The results of this study support the implementation of a few practical steps that districts might take in supporting principals. First, districts might provide opportunities for existing and aspiring principals to work with special education students and within special education classrooms. Additionally, the findings of this study support the implementation of policies that ensure ongoing professional development opportunities for existing and aspiring school leaders with the aim of helping those educators become knowledgeable about interventions as well as about inclusive instructional practices and co-teaching models.

Finally, the findings of the LSIS study suggest that higher education principal preparation programs might want to increase requirements for coursework and field experiences that focus on RTI and other inclusive practices. These courses and field experiences would expand aspiring principals’ knowledge about interventions and foster positive attitudes toward inclusion. Praisner (2003) recommends that principal
preparation programs should dedicate one-tenth of their coursework to such considerations.

**Limitations**

This section explains the LSIS study’s limitations and the cautions in interpreting its findings that result from these limitations. First, this study did not test a fully specified model. The nature of the personal characteristics and contextual conditions that can influence a principal’s support for interventions is broad in scope. Only a few such characteristics were included, however, in the LSIS study’s model. A more fully specified model would, of course, have had greater explanatory power. Including exogenous variables such as school resources, SES, enrollment, and so on would have provided a richer understanding of the conditions influencing principals’ support for RTI.

Furthermore, the study used correlational techniques with data collected using a survey. As such, the findings make only associational, rather than causal, claims (Campbell & Stanley, 1963; Cone & Foster, 1996; Curren & Wirth, 2004; Neuman, 2006). The variables of interest (e.g., principals’ instructional philosophies) could not be easily manipulated experimentally, of course—a circumstance justifying the use of a correlational design.

In addition, the study used a survey to collect self-reported data from respondents. This type of data collection is limited because it relies on participants’ accuracy and honesty (Converse & Presser, 1986). Further, social desirability bias can elicit exaggerated or overly positive responses. Social desirability bias is a problem in survey research because respondents’ desire for social acceptance or need for social approval
sometimes prompts them to give answers that are not completely honest (Phillips & Clancy, 1972). To combat this bias, the cover letter accompanying the questionnaire encouraged respondents to give honest and accurate reports of their practices and perspectives (see Appendix D). Additionally, the survey items were worded carefully so the respondents could not merely guess the most socially desirable response. Despite these efforts, many respondents may have provided socially desirable responses on the LSIS and School Practices scale. This possibility is supported by evidence of a negative skew in the distribution for these variables. The degree or extent to which social desirability bias impacted the data is unknown; however, in future research endeavors, perhaps a different format or calibration of questions could decrease the risk of bias.

The findings also could be limited in their generalizability. The survey was distributed to middle-grade-level principals in Ohio only. As a result, the findings cannot be generalized to principals in other states or to principals who serve very young children or young adults. Furthermore, since the survey gathered information from principals only, the findings cannot be applied to teachers, superintendents, or other school personnel.

Summary

This chapter examined the LSIS study findings within the context of related literature, underscored the strength of the evidence from this and earlier studies, presented recommendations for further inquiry and for education practice and policy, discussed the study’s limitations, and explained difficulties encountered in the data collection and data analysis phases.

The study produced the following major findings:
• The more time a principal spent as a teacher, in general, or as a general education teacher, specifically, the less likely he or she will be to support interventions for struggling students.

• A principal’s education philosophy is a predictor of his or her leadership support for interventions. Principals with student-centered philosophies are more likely to support interventions, while teacher-centered principals are less likely.

The results of this and previous studies suggest the following recommendations for further research:

• Target the exogenous characteristics that could influence principals’ LSIS.

• Consider the contextual variable of a district’s resources by investigating the influence of per-pupil expenditures on LSIS.

• Consider the contextual variable of student socioeconomic status based on the number of students who receive federal support through the free and reduced-price lunch program.

• Consider the contextual variable of student enrollment based on district longitudinal data.

Recommendations for practice and policy include the following:

• Human resource departments and interview committees might consider the practice of assessing a potential new principal’s previous types of teaching experience as part of the interview and hiring process.
• Districts should consider providing targeted professional development and training opportunities to principals whose sole or primary classroom teaching experience has been in general education.

• As part of the individualized professional development planning process, principals might want to incorporate professional development opportunities that focus on leadership support for interventions.

• Districts might consider the potential value of providing ongoing professional development opportunities for existing and aspiring leaders to help their professional educators become more familiar with and to develop background knowledge in inclusive and co-teaching models.

• As part of their principal preparation programs, institutions of higher learning might want to increase their requirements for coursework and field experiences focusing on RTI and other inclusive practices.

The chapter concluded with a discussion of the study’s limitations, including errors in linking contextual information with other data about principals, alternative procedures for alleviating similar errors in further research, and ideas for strengthening the research.
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Appendix A: School Practices Survey


Pittsburgh, PA.

Below are 10 instructional practices arranged as dimensions. While we recognize that both elements are likely to be found to some extent, we are asking you to choose a circle showing which side *tends to be emphasized more in your school*. Thank you.

| Follows an established year-by-year curriculum. | O O O O O | Curriculum is decided by the classroom teacher. |
| Assessment relies on periodic testing, with norm-referenced, objective tests. | O O O O O | Assessment relies on portfolios featuring individual and collaborative projects. |
| Grades are assigned by comparing performance with age/grade peers | O O O O O | Grades are downplayed in favor of teacher comments on progress. |
| All students are expected to meet minimal competency levels. | O O O O O | Standards are adjusted to take into account individual differences. |
| Teacher primarily seen as academic instructor; authority figure. | O O O O O | Teacher primarily seen as facilitator, mentor. |
| Teacher centered instruction with teacher directing the learning. | O O O O O | Student centered classroom; individual/group activity; project work. |
| Individual teachers teaching specific subjects | O O O O O | Interdisciplinary teams teaching many subjects; team teaching. |
| Grouping of students homogeneously by academic ability (tracking). | O O O O O | Grouping of students heterogeneously by academic ability (no tracking). |
| Regular instructional periods. | O O O O O | Flexible instructional time. |
| Students must show subject mastery before being promoted to next grade. | O O O O O | Students are not retained for any reason. |
Appendix B: Pilot Survey Instrument

Thank you for your willingness to participate in the study. Please choose the responses that best fit your current professional status, instructional philosophy, belief(s), attitude(s), personal experience(s), and practice(s).

How long have you been in your current position?
- □ Less than 5 years
- □ 5-10 years
- □ 10-20 years
- □ 20-30 years
- □ Retire-rehire

| Follows an established year-by-year curriculum. | O O O O O | Curriculum is decided by the classroom teacher. |
| Assessment relies on periodic testing, with norm-referenced, objective tests. | O O O O O | Assessment relies on portfolios featuring individual and collaborative projects. |
| Grades are assigned by comparing performance with age/grade peers | O O O O O | Grades are downplayed in favor of teacher comments on progress. |
| All students are expected to meet minimal competency levels. | O O O O O | Standards are adjusted to take into account individual differences. |
| Teacher primarily seen as academic instructor; authority figure. | O O O O O | Teacher primarily seen as facilitator, mentor. |
| Teacher centered instruction with teacher directing the learning. | O O O O O | Student centered classroom; individual/group activity; project work. |
| Individual teachers teaching specific subjects | O O O O O | Interdisciplinary teams teaching many subjects; team teaching. |
| Grouping of students homogeneously by academic ability (tracking). | O O O O O | Grouping of students heterogeneously by academic ability (no tracking). |
| Regular instructional periods. | O O O O O | Flexible instructional time. |
How many years of experience do you have in education?

__________

If you have worked as a special education teacher, how long were you in that position?

__________

What is your gender?

☐ Male
☐ Female

How many years of administrative experience do you currently have?

☐ Less than 5 years
☐ 5-10 years
☐ 10-20 years
☐ 20-30 years
☐ 30 years or more

Highest degree earned?

☐ Doctorate
☐ Masters
☐ Bachelors
☐ Other

Instructional Philosophy School Practices Survey M.2 (Dr. Louis Chandler, 2002)
Please choose the circle that is most closely aligned with practices you would like to see happening in your school?

<table>
<thead>
<tr>
<th>Beliefs</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
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</thead>
<tbody>
<tr>
<td>1) Giving additional time to struggling students is</td>
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</table>

Principals’ Receptivity to Intervention Survey Instrument (PRISI, Lusher 2013)
Please provide your response to the following statements by checking the box that represents your agreement, disagreement, and/or neutrality.
important in my school.

2) Frequent, formative assessment is important to students’ learning.

3) Students’ response to intervention provides information.

4) Data obtained through progress monitoring help identify student needs.

5) Staff should provide intervention to struggling students.

6) Resources should be allocated to provide intervention to struggling students.

7) A building-wide framework for providing intervention needs to be in place in all schools.

8) The role of a school is to ensure that all students learn.

9) Teachers need to do whatever is necessary to ensure that all students learn.

10) Student learning should drive
Providing intervention to students is a key function of all classroom teachers.

Ensuring that the school has a system of intervention is a key function of the principal.

<table>
<thead>
<tr>
<th>Attitudes</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
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</thead>
<tbody>
<tr>
<td>1) I am open to new ideas about intervention.</td>
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<td>2) I enjoy trying new things in my school or in my classroom.</td>
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<td>3) I feel it is important to help struggling students.</td>
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<td>4) I feel strongly that schools should develop new ways to help struggling students.</td>
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<td>5) I feel that teachers are generally supportive of new initiatives.</td>
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<td>6) I feel it is important to be a lifelong learner.</td>
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<td>7) I am pleased when teachers are comfortable</td>
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<tr>
<td>Question</td>
<td>Strongly Agree</td>
<td>Agree</td>
<td>Neutral</td>
<td>Disagree</td>
<td>Strongly Disagree</td>
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<tr>
<td>8) I dislike trying new things.</td>
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<td>9) I feel that change promotes growth.</td>
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<td>10) I feel that responsive intervention is a primary function of a school.</td>
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<td>11) I enjoy solving problems.</td>
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<tr>
<td>12) I feel it is very important to collaborate.</td>
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<tr>
<td>Personal Experiences</td>
<td>Strongly Agree</td>
<td>Agree</td>
<td>Neutral</td>
<td>Disagree</td>
<td>Strongly Disagree</td>
</tr>
<tr>
<td>1) I have experiences working with general education and special education students.</td>
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<tr>
<td>2) I have experience in the special education classroom.</td>
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<tr>
<td>3) I have been trained in providing intervention to students.</td>
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<td>4) I have seen intervention positively impact student learning.</td>
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<td>5) I have observed students grow academically through the supports of an RTI model.</td>
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<tr>
<td></td>
<td>Strongly Agree</td>
<td>Agree</td>
<td>Neutral</td>
<td>Disagree</td>
<td>Strongly Disagree</td>
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<tr>
<td>6) I have experiential evidence to support that intervention works.</td>
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<td>7) I have observed that intervention is not effective for students.</td>
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<td>8) I am very familiar with response to intervention.</td>
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<tr>
<td>9) I have attended professional development focused on providing intervention to struggling students.</td>
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<td>10) My principal preparation program included courses focused on intervention.</td>
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<tr>
<td>11) I have personal experiences working with students who have special needs.</td>
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<tr>
<td>12) I am or have been a member of team a team committed to providing interventions to students (i.e. Intervention Assistance Team, RTI team, etc.)</td>
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</table>

<table>
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<tr>
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<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
</table>
1) I make response to intervention my priority at school.

2) I provide professional development time focused on meeting the needs of struggling learners.

3) I encourage collaboration between special education and general education teachers.

4) I create opportunities for general education, special education, and intervention specialists to collaborate.

5) I provide resources to support staff in sustaining RTI services within my building.

6) I coordinate meetings with staff to discuss intervention for students.

7) I communicate regularly with staff about the importance of providing responsive intervention to all learners.

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<tr>
<th>Practices/Actions</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
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<td>8)</td>
<td>I provide additional time to enable staff members to implement interventions.</td>
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<td>9)</td>
<td>I am involved in the planning of interventions in my school.</td>
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<td>10)</td>
<td>I lead intervention initiatives in my school.</td>
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<tr>
<td>11)</td>
<td>I partner with staff to evaluate the alignment of teaching practices with research findings about RTI.</td>
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<tr>
<td>12)</td>
<td>I provide staff members with research based evidence to support the use of various interventions.</td>
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Appendix C: Concept Map

Personal Experiences
- attended
- working
- have
- trained
- providing
- observed
- seen
- committed

Receptivity

Beliefs
- provide
- allocate
- ensure
- should
- giving

Practices/Actions
- respond
- create
- make
- provide
- partner
- enable
- support
- sustain
- involved
- encourage
- lead
- communicate

Attitudes
- trying
- am
- feel
- develop
- collaborate
- solving
Appendix D: Informed Consent/Information Regarding Study Participation

Dear Colleague,

My name is Jamie Lusher and I am doctoral student and a fellow instructional administrator; I have spent most of my administrative career as middle school principal, I am writing to get your help with my dissertation study. The study involves an on-line survey that will provide insights into the potential characteristics that may influence middle school principals’ receptivity to Response to Intervention (RTI). RTI is a reform that has impacted the work we do as principals, and to better understand its relevance, I would like to hear from as many principals as possible. Your insights will add to body of research that is very limited, but greatly needed by practitioners, like me. The survey will ask you about your experiences as a teacher, experiences as an administrator, and your instructional philosophy. The responses that you provide will be anonymous, and all reported findings will focus on general trends across the data, not on individual cases. I earnestly thank you for your time and consideration. I hope that you will provide your valuable insights and exercise your voice as a middle school principal. Should you have questions or require additional information, please do not hesitate to contact me at jlusher@worthington.k12.oh.us or 614.450.6077 or my dissertation chair, Aimee Howley (howley@ohio.edu, 740-593-4402).

The survey should take only ten minutes to complete. If you are at least 18 years of age or older and willing to take this survey please click the link below:

LINK TO QUALTRICS SURVEY

Best,

Jamie Lusher
Ohio University Doctoral Student
Appendix E: IRB Review Form

Project Title: Principals' Reactivity to Response to Intervention in the Middle Grades

Primary Investigator: Jamie Scott Lusher

Co-Investigators:

Advisor: Aimee Howley

Department: Education

Robin Stack, CIP, Human Subjects Research Coordinator
Office of Research Compliance

Date: Jan. 9, 2013

The approval remains in effect provided the study is conducted exactly as described in your application for review. Any additions or modifications to the project must be approved for as amendments/updates to implementation.
Appendix F: IRB Approval

Jamie Lusher,

Your IRB submission titled, "Principals' Receptivity to Response to Intervention in the Middle Grades", has been reviewed in the Office of Research Compliance and determined to qualify for Exemption, Category 2. Based on changes you made to the consent statement, your study was approved. Attached is the approval form for the protocol. Please retain a copy of this approval with your records of this study.

Any changes to this approved protocol whatsoever, from this point forward, must be submitted as an amendment and approved by the IRB prior to implementation. This includes even minor changes, such as adding a new investigator, changing the study site, or increasing enrollment. Additionally you are required to immediately report any adverse events, problems, or unanticipated occurrences to the IRB. Our website has guidance on the reporting requirements for such events. The Amendment Form and the Adverse Event Reporting Form can be found on our website at www.research.ohiou.edu/compliance.

Best wishes with your research!

Mrs. Robin Stack, CIP
Human Subjects Research Coordinator
Office of Research Compliance
Appendix G: Consent to Change Administration of School Practices Survey

Ms Lusher,

Thank you for keeping me informed on your progress. I can certainly understand the rationale for changing the wording in the context of your study. It does indeed shift the emphasis to get at the values of the principal rather than the current practices in place. Should yield some interesting results.

Best wishes,

Louis Chandler

On Nov 19, 2012, at 5:26 PM, Lusher, Jamie wrote:

Dr. Chandler,

As promised, I wanted to follow up and share that my dissertation proposal was accepted :) I completed my oral examination this afternoon. My committee had great suggestions and feedback to help in my future work of this study. I can't thank you enough for contribution to this study. I wanted to check something with you, if that is okay? The School Practices M.2 survey is included as a portion of my questionnaire devoted to the independent variable of instructional philosophy. It was a suggestion from my committee that I re-word the directions to the survey from: Choose a circle which side tends to be emphasized more in your school to: Choose the circle that is most closely aligned with what you would like to see happening regularly at your school.

The rationale for this change, as deemed by my committee, is that principals may inherit buildings and/or staff that impart school practices that may not be aligned with the principal's instructional philosophy. By changing the directions, the hope is that the respondent will provide responses that are indicative of their instructional philosophy despite/because of the current context of their schools.

Again, thank you so much for all of your help and obviously, for the contribution your research continues to have on practitioners like myself :)

Best,

Jamie

Jamie Lusher
Appendix H: School Practices Scree Plot and Factor Loadings

Table School Practices Survey Scree Plot

![Scree Plot]

Component Matrix for School Practices Survey

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<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Component 1</th>
<th>Component 2</th>
<th>Component 3</th>
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<td>1</td>
<td>Follows established year by year curriculum. Curriculum is decided by the classroom teacher.</td>
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<td>Assessment relies on periodic testing with norm-referenced objective tests. Assessment relies on portfolios featuring individual and collaborative projects.</td>
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<td>Grades are assigned by comparing performance with age/grade peers. Grades are downplayed in favor of teacher comments on progress.</td>
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<td>.460</td>
<td>.100</td>
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<tr>
<td>4</td>
<td>All students are expected to meet minimal competency levels. Standard are adjusted to take into account individual differences.</td>
<td>.472</td>
<td>.536</td>
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<tr>
<td>5</td>
<td>Teacher primarily seen as academic instructor; authority figure. Teacher primarily seen as facilitator, mentor.</td>
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<td>6</td>
<td>Teacher centered instruction with teacher directing the learning. Student centered classrooms; individual/group activity, project work.</td>
<td>.771</td>
<td>-.323</td>
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</table>
### Rotated Matrix for the School Practices Survey

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<td>Teacher centered instruction with teacher directing the learning. Student centered classrooms; individual/group activity, project work.</td>
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<td>Individual teachers, teaching specific subjects.</td>
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<td>Interdisciplinary teams teaching many subjects;</td>
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<td>Grouping students homogeneously by academic ability (tracking).</td>
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<td>Regular instructional periods. Flexible</td>
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<td>are not retained for any reason.</td>
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## Appendix I: PRISI Factor Loadings

### Component Matrix for the PRISI

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<td>48</td>
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</table>
Appendix J: Reliability Calculations and Tables for the PRISI

*Item Total Statistics and Reliability of 14 items of the PRISI*

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Scale Mean if Item Deleted</th>
<th>Scale Variance if Item Deleted</th>
<th>Corrected Item-Total Correlation</th>
<th>Cronbach’s Alpha if Item Deleted</th>
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</thead>
<tbody>
<tr>
<td>47</td>
<td>I partner with staff to evaluate the alignment of teaching practices with research findings about RTI.</td>
<td>23.03</td>
<td>57.596</td>
<td>.730</td>
<td>.924</td>
</tr>
<tr>
<td>48</td>
<td>I provide staff members with research based evidence to support the use of various interventions.</td>
<td>23.14</td>
<td>58.962</td>
<td>.667</td>
<td>.926</td>
</tr>
<tr>
<td>46</td>
<td>I lead intervention initiatives in my school.</td>
<td>23.25</td>
<td>59.122</td>
<td>.682</td>
<td>.925</td>
</tr>
<tr>
<td>45</td>
<td>I am involved in the planning of interventions in my school.</td>
<td>23.47</td>
<td>60.919</td>
<td>.644</td>
<td>.926</td>
</tr>
<tr>
<td>44</td>
<td>I provide additional time to enable staff members to implement interventions.</td>
<td>23.22</td>
<td>59.438</td>
<td>.663</td>
<td>.926</td>
</tr>
<tr>
<td>43</td>
<td>I communicate regularly with staff about the importance of providing responsive interventions for all learners</td>
<td>23.39</td>
<td>60.059</td>
<td>.717</td>
<td>.924</td>
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<tr>
<td>42</td>
<td>I coordinate meetings with staff to discuss intervention for students.</td>
<td>23.41</td>
<td>60.180</td>
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<td>.925</td>
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<td>41</td>
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<td>23.32</td>
<td>58.983</td>
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<td>40</td>
<td>I create opportunities for general education, special education and intervention specialists to collaborate.</td>
<td>23.55</td>
<td>61.780</td>
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<td>.928</td>
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<td>38</td>
<td>I provide professional development time focused on meeting the needs of struggling learners.</td>
<td>23.37</td>
<td>60.702</td>
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<td>.925</td>
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<td>37</td>
<td>I make response to intervention a priority in my school.</td>
<td>23.32</td>
<td>59.679</td>
<td>.719</td>
<td>.924</td>
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<tr>
<td>33</td>
<td>I have attended professional development focused on providing interventions to struggling students.</td>
<td>23.48</td>
<td>60.333</td>
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<td>.927</td>
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<tr>
<td>32</td>
<td>I am very familiar with response to intervention.</td>
<td>23.36</td>
<td>59.930</td>
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<td>29</td>
<td>I have observed students grow academically through the supports of an RTI model.</td>
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*Alpha Reliability Calculation*

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### Appendix K: Descriptive Statistics for the Survey

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<th>Statistic</th>
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<th>Skewness</th>
<th>Std. Error of Skewness</th>
<th>Kurtosis</th>
<th>Std. Error of Skewness</th>
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<td>Item</td>
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<td></td>
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<tr>
<td>Years in current Position</td>
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<td>7.840</td>
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<td>Years of Experience in Education</td>
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<td>.146</td>
<td>.739</td>
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<td>Years as a Principal</td>
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<td>1.740</td>
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<td>Length of time as Special Education Teacher</td>
<td>2.49</td>
<td>3.886</td>
<td>2.792</td>
<td>.156</td>
<td>7.623</td>
<td>.310</td>
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<td>Current Admin. Experience</td>
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<td>7.071</td>
<td>1.579</td>
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### Descriptive Statistics for School Practices Items 1-5

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<th>Kurtosis</th>
<th>Std. Error of Skewness</th>
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<td>Item</td>
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<td>Item 1) Assessment (Norm-ref. vs. Portfolio)</td>
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<td>Item 2) Teacher as Instructor vs. Facilitator</td>
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<td>1.025</td>
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<td>Item 3) (Teacher centered instruction vs. Student led)</td>
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<td>.718</td>
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<tr>
<td>Item 4 (Individual teaching vs. Inter-disciplinary teams)</td>
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<td>1.202</td>
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<tr>
<td>Item 5 (Regular Instructional Periods vs. Flexible Blocks)</td>
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### Descriptive Statistics for LSIS Items 1-14

<table>
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<th>Std. Error of Skewness</th>
<th>Kurtosis</th>
<th>Std. Error of Skewness</th>
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<tr>
<td>Item 1 (I have observed students grow through RTI)</td>
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<td>.713</td>
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<td>.788</td>
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<td>Item 6 (I create opportunities for collaboration between general education &amp; special education teacher)</td>
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<td>.800</td>
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<td>Item 7 (I provide resources to support staff in sustaining RTI)</td>
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<td>Item 9 (I communicate regularly with staff about the importance of providing interventions for all learners)</td>
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<td>Item 10 (I provide additional time to enable staff to implement interventions)</td>
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<td>.339</td>
<td>.295</td>
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<td>Item 13 (I partner with staff to evaluate the alignment of teaching practices with)</td>
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Item 14 (I provide staff members with research based evidence to support the use of various interventions)

<p>| | | | | | | |</p>
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</table>
Appendix L: LSIS

Thank you for your willingness to participate in the study. Please choose the responses that best fit your current professional status, instructional philosophy, belief(s), attitude(s), personal experience(s), and practice(s).

How long have you been in your current position?

How many years of experience do you have in education?

If you have worked as a special education teacher, how long were you in that position?

What is your gender?
- □ Male
- □ Female

How many years of administrative experience do you currently have?

Highest degree earned?
- □ Doctorate
- □ Masters
- □ Bachelors
- □ Other

Modified Instructional Philosophy School Practices Survey M.2 (Dr. Louis Chandler, 2002)
Please choose the circle that is most closely aligned with practices you would like to see happening in your school?

<table>
<thead>
<tr>
<th>Assessment relies on periodic testing, with norm-referenced, objective tests.</th>
<th>O O O O O</th>
<th>Assessment relies on portfolios featuring individual and collaborative projects.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher primarily seen as academic instructor; authority figure.</td>
<td>O O O O O</td>
<td>Teacher primarily seen as facilitator, mentor.</td>
</tr>
<tr>
<td>Teacher centered instruction with teacher directing the learning.</td>
<td>O O O O O</td>
<td>Student centered classroom; individual/group activity; project work.</td>
</tr>
<tr>
<td>Practice/Action</td>
<td>Strongly Agree</td>
<td>Agree</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------------</td>
<td>----------------</td>
<td>-------</td>
</tr>
<tr>
<td>1) I have observed students grow academically through RTI.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2) I am very familiar with response to intervention.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3) I have attended professional development focused on providing intervention to struggling students.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4) I make response to intervention my priority at school.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5) I provide professional development time focused on meeting the needs of struggling learners.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6) I create opportunities for general education, special education, and intervention specialists to collaborate.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7) I provide resources to support staff in sustaining RTI services within my building.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8) I coordinate meetings with staff to discuss</td>
<td></td>
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</table>

**Leadership Support for Interventions Scale** (LSIS, Lusher 2014)

Please provide your response to the following statements by checking the box that represents your agreement, disagreement, and/or neutrality.
<table>
<thead>
<tr>
<th></th>
<th>intervention for students.</th>
</tr>
</thead>
<tbody>
<tr>
<td>9)</td>
<td>I communicate regularly with staff about the importance of providing responsive intervention to all learners.</td>
</tr>
<tr>
<td>10)</td>
<td>I provide additional time to enable staff members to implement interventions.</td>
</tr>
<tr>
<td>11)</td>
<td>I am involved in the planning of interventions in my school.</td>
</tr>
</tbody>
</table>
| 12) | I lead intervention initiatives  
a. in my school. |
| 13) | I partner with staff to evaluate the alignment of teaching practices with research findings about RTI. |
| 14) | I provide staff members with research based evidence to support the use of various interventions. |