Impact of Teacher Concerns on
Response to Intervention Implementation

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The undersigned, appointed by the dean of the Graduate School, have examined the dissertation entitled

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presented by Dorothy J Landon,

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and hereby certify that, in their opinion, it is worthy of acceptance.

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DEDICATION

I dedicate this dissertation to my wonderful family and friends who shared in the risks and sacrifices necessary to complete this work. The first of these is my magnificent husband, Stan, who has had a profound influence on my life. His love, support, and inspiration provided me the strength and perseverance necessary to achieve this amazing goal. He sacrificed much and asked for little during this long, long journey. A special feeling of gratitude goes to my loving parents, Fred and Judy Steece, who taught me to work hard, love completely, and fight for what I believe in. Their love and words of encouragement have been essential to my success.

I also dedicate this dissertation to my many friends who have supported me throughout the process. I will always appreciate all they have done. Christie Crouch is a very dear friend who deserves my special thanks and undying gratitude as she has been there for me from the very beginning. She has shared in all of the blood, sweat, and tears that have gone into earning this doctorate.

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Abstract

The purpose of the current research study is to describe the relationships between teacher concerns and level of "Response to Intervention" (RtI) use. Additionally, the study examined the influence demographic variables (gender, age, years of service, and level of degree) have on teacher concerns related to adopting RtI. The Concerns Based Adoption Model (CBAM, Hall & Hord, 1987; 2001) was used as a theoretical framework to conduct the study. The Stages of Concern Questionnaire (SoCQ), developed out of the CBAM, and Level of RtI Use Questionnaire (LRIUQ), developed by the researcher for this study, were used in the non-experimental, cross-sectional survey design to address the research questions. The SoCQ was used to evaluate concerns about innovation adoption by evaluating participant responses on each of seven scales, and the LRIUQ was used to evaluate teacher use of RtI based on a total scale score. Multiple regression analysis was used to evaluate relationships between concerns, RtI use, and teacher demographic characteristics.

Overall, the study found that teachers who scored the highest on early stages of concern (0 and 1) scored low on RtI use, which supports Hall and Hord's (1987) concerns theory. In addition, gender status was found to potentially be predictive of teacher concerns. Males in this study were more likely to have Stage 1 and Stage 2 concerns, indicating that they are in early stages of RtI use. The findings from this study may have implications for how teachers are trained, which teachers are hired, how RtI is introduced to teachers and how they can be included in the process to facilitate greater buy-in, and how teachers are coached through professional development

CHAPTER ONE

Introduction

Meeting the needs of all learners in today's society is as challenging as it is

rewarding for educators throughout the country. Although children with learning

disabilities (LD) have been part of the education process since the inception of public

education, it wasn't until 1975 that LD was included in the Education for All

Handicapped Children Act (EAHCA). This act specifically outlined the federal criteria

for determining LD among children and made provisions for identified children to

receive services (US Department of Education, 2006). Since then, tens of thousands of

children have been diagnosed with LD and the numbers continue to escalate (Denton,

Vaughn, & Fletcher, 2003). In fact, the percentage of students being served with LD has

never been higher than it is today (Gresham, 2002; US Department of Education, 2006).

The incidence of LD is noted to have increased substantially from 1976-1977 to 1996-

1997 (Gresham, 2002; MacMillan & Siperstein, 2002). The number of students served

with LD during this time span increased from 1.2 million to 2.8 million (US Department

of Education, 2006). These statistics show a startling increase of 283% in little more than

two decades (US Department of Education, 2006). LD is the largest of 13 categories

defined under the Individuals with Disabilities Education Act (IDEA) and it alone

accounts for over half of all students served within special education in the United States

(Denton, Vaughn, & Fletcher, 2003; US Department of Education, 2006). At the same

time that this marked increase has occurred, students with disabilities other than LD

served under IDEA have remained constant and in some cases have decreased (US

Department of Education, 2006). For example, the number of students served as MR

decreased by 60% during the same time frame noted above (US Department of

Education, 2006). It has been suggested that the severe increase in LD is equal to an

"epidemic" (Gresham, 2002; MacMillan & Siperstein, 2002); however, it has not been

recognized as a public health issue to date.

Scientist practitioners working in the area of special education have identified

anomalies within the LD identification process and offer plausible explanations for the

sharp increase in LD identification (Shinn, Tindal & Spira, 1987; Vaughn & Fuchs,

2003). These suggested factors have included 1) greater social acceptance of LD, 2)

increase in literacy requirements for employability and quality of life, and 3) rigorous

legislation holding educators accountable for the academic success of all students (Shinn,

Tindal, & Spira 1987; Vaughn & Fuchs, 2003). The causative factor most widely

addressed in the LD literature involves the inconsistent process used by most public

schools to identify students with LD (Foorman, Francis, Fletcher, & Lynn, 1996;

Gresham, 2002; Stuebing et al., 2002). According to many, the process is at best

confusing (Coutinho, 1995; Scruggs & Mastropiere, 2002) and at worst illogical

(Gresham, 2002; Howell & Nolet, 2000; Mellard, Deshler, & Barth, 2004). In their

attempt to sum up the LD identification process, Reid Lyon, former Chief of the Child

Development and Behavior Branch with the National Institute of Child Health and

Human Development at the National Institute of Health, is quoted as saying, "LD is a

sociological sponge soaking up the spills from general education" (Lyon et al., 2001, p.

259). A variety of legitimate reasons have been cited to demonstrate that the

identification process for LD is deficient and ineffective when applied to a population of

students who are diverse in abilities and needs, including: (1) lack of an agreed upon

operational definition of discrepancy (Peterson & Shinn, 2002); (2) variability in the process to identify individuals with LD within and across agencies (Mellard, Deshler, & Barth, 2004); (3) the use of the flawed IQ-achievement discrepancy procedure to determine LDs (Coutinho, 1995; Forness, Sinclair, and Guthrie, 1983; Fuchs, Mock, Morgan, & Young, 2002; Reynolds, 1984; Reynolds, 1990; Vaughn & Fuchs, 2003; Wilson & Reynolds, 1984); (4) inability to distinguish between individuals with LD and those with general low achievement (Fletcher et al., 1998; Scruggs & Mastropiere, 2002; Shinn, Ysseldyke, & Deno, 1986; Ysseldyke, Algozzine, Shinn, & McGue, 1982), and (5) that identification alone does not lead to intervention or differentiated instruction (Hale, 2006).

Current identification processes frequently used by public schools to conceptualize and identify students with an LD are essentially flawed and many professionals in the field of education recognize that a more effective process is necessary (Batsche et al., 2007; Gresham, 2002; Howell & Nolet, 2000; Reschly, 2003; Vaughn & Fuchs, 2003). Information shared at the 2001 Disabilities Summit by professionals with long standing recognition in the field of special education validated this need and advanced a movement to focus the profession on LD identification that is based on how students respond to instructional interventions rather than on a discrepancy that exists between ability and achievement (Gresham, 2002). This change in focus, along with the 2004 reauthorization of IDEA, has empowered professionals to examine academic and social outcomes of students with alternative approaches based on instructional and intervention effectiveness (Batsche et al., 2007).

A paradigm shift within the field of special education is in order. Thomas Kuhn (1962) defined a paradigm shift as a change in basic assumptions among members of a scientific community. A shift to include a seamless educational system concerned with effective instruction for all students, prevention and early intervention, data based decision-making, and positive student outcomes (Reschly & Ysseldyke, 2002) is needed. Response to Intervention (RtI) has emerged as a potential model to address the need for this shift via more effective practice within schools (Bradley & Danielson, 2004; Brown-Chidsey & Steege, 2005; Tilly, 2003). According to Batsche et al., (2007), Brown-Chidsey and Steege (2005), and Case, Speece, and Malloy, (2003) RtI may be the most promising approach for decreasing the scope and severity of the difficulties encountered by students at risk for school failure and LD identification. The RtI framework has been shown to accelerate student learning as well as to explain low achievement (Reschly & Ysseldyke, 2002). This approach integrates services in order to connect general, remedial, and special education through the use of a problem-solving model (Reschly & Ysseldyke, 2002), which is distinctly different from the current identification process (Burns & Ysseldyke, 2005).

The introduction of an innovation into an educational system presents many new challenges (Hall & Hord, 1987; 2001), which may result in teachers experiencing various feelings, attitudes, and beliefs (Holloway, 2003).   In order to affect change, these factors need to be understood and addressed during the change process (Holloway, 2003). The Concerns Based Adoption Model (CBAM) provides a theoretical framework to address the adoption of the RtI innovation. Supporting teachers in adopting RtI has the potential to improve classroom instruction and assist teachers in better understanding and

addressing student difficulties through data analysis and intervention development (Fuchs

& Fuchs, 2007). Ultimately, the adoption of RtI has the potential to positively impact

student achievement outcomes (Brown-Chidsey & Steege, 2005). Therefore, addressing

teacher concerns regarding implementation of RtI during the change adoption process is

essential.

      This framework was developed on the premise that the single most important

factor in any change process is the people involved in the change, therefore, facilitating

change means understanding the existing attitudes and perceptions of those involved in

the process (Hall & Hord, 1987; 2001). The following literature review will discuss the

core principles and essential components of RtI and examine the Concerns Based

Adoption Model (Hall & Hord, 1987; 2001) as a framework to understand the impact

adopting RtI may have on teachers.

CHAPTER TWO

Literature Review

Through the traditional LD identification model, a LD has been primarily

determined based on the presence of an unexpected gap between a student's potential

ability and achievement (Gresham, 2002). As discussed previously there are a number of

limitations to this process, therefore, alternative methods to identify students with LD are

being sought out by some in the field of school psychology and special education

(Vaughn & Fuchs, 2003). RtI is a promising alternative to the traditional model that

focuses on applying a problem-solving framework to identify and address students'

difficulties using effective, efficient instruction that leads to improved achievement

(Batsche et al., 2007).

Response to Intervention (RtI)

RtI is a multi-tiered, scientifically based, problem-solving framework that

examines instruction, curriculum, and intervention effectiveness through data based

decision-making (Batsche et al., 2007; Brown-Chidsey & Steege, 2005; Marston,

Muyskens, Lau, & Canter, 2003; Tilly, 2003). The framework consists of a continuum of

well integrated multiple tiers of intervention, each of which increases in intensity and

duration depending on student outcomes (See Figure 1; Batsche et al., 2007).

The RtI approach contributes to a better understanding of effective instruction and

informed decision-making based on frequent data collection. The primary goal of RtI is

to determine what interventions are the most effective in increasing student achievement,

as well as to ensure fidelity of intervention implementation (Gresham, 2002; Hale, 2006).

Decisions are made based on data gathered regarding student responsiveness to evidence-

Figure 1. Continuum of Intervention Tiers
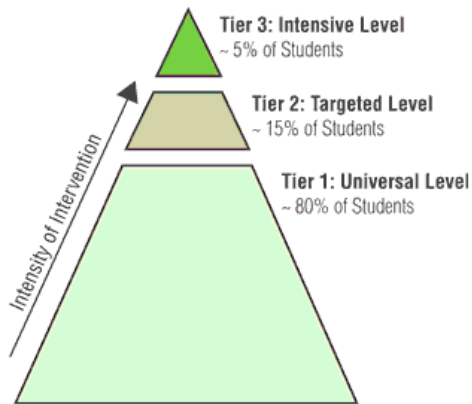
Adapted from Batsche et al., 2007.

based interventions implemented with high levels of integrity. General education's

potential effectiveness for the majority of students in the general population may be

maximized through the use of RtI. This multi-tiered intervention framework, has the

potential to decrease the scope and severity of difficulties encountered by students at risk

for school failure by progressing through problem solving stages. The framework

consists of a continuum of intervention tiers, each of which increases in intensity and

duration depending on student outcomes (Batsche et al., 2007). The problem solving

process occurs within each tier to inform the team's decision making and to assist them in

better understanding the quality of instruction being delivered to students at various

levels of intervention. This multi-tiered approach is designed to identify cases early,

facilitate access to intervention, ensure the delivery of quality instruction, and frequently

assess the outcome of interventions (Chidsey-Brown & Steege, 2005). Because of this

cyclical integrated service delivery model, RtI has been found to be more effective than

the traditional identification model for impacting student achievement (Reschly, 2008).

The model is designed to allow students to move within and between tiers as problem

solving occurs. It is this design that eliminates the practice of having a predetermined

end result in mind when evaluating a student, such as with the traditional model. A brief

description of the tiers of intervention follows.

Tier 1: primary prevention.

Primary prevention makes up tier 1 of the RtI pyramid, which focuses on

preventing the development of academic disabilities by focusing on all students and staff

throughout the system (Batsche et al., 2007). At this tier, high quality core curriculum is

delivered to all students at all grade levels in the general education setting. Research

based curricula have been scientifically proven to produce adequate levels of

achievement in specific core academic areas (Marzano, Pickering, & Pollock, 2001). In

addition, evidence based instruction strategies assist educators in differentiating

instruction in order to meet the broad range of student needs. At tier 1, universal

screenings are given to all students at all grade levels at least three times a year to

determine students' academic proficiency (Batsche et al., 2007; Brown-Chidsey &

Steege, 2005). The data obtained through these screenings is intended to accomplish two

things, (1) it encourages teachers to shape their instruction to address the areas of concern

identified through data analysis and (2) it aids in determining which students may be at

risk for poor academic outcomes. Teams of teachers analyze the data by grade level to

set whole group goals and determine what instruction will best meet needs of the majority

of students. In this tier, educators are interested in whole group interventions aimed at

increasing proficiency for the greatest amount of students in the classroom. In addition to

adjusting instruction using the screening data, educators are also able to determine which

students may need continued short term performance/progress monitoring. Students who

score below a performance benchmark on the screening, determined by the school, (e.g.,

< 15 correct words per minute on a 1st grade curriculum based measurement of word

fluency) may be identified as potentially at risk for poor academic outcomes. These

students continue to have their performance monitored for a short period of time, five to

eight weeks, to confirm or disconfirm the initial screening outcome. If the additional

monitoring confirms the initial at risk status suggested at the time of screening, despite

the instructional adaptations, a problem-solving process (described later in this review)

using functional academic and behavioral assessments ensues. RtI is first and foremost a

general education initiative targeting all students in the general education classroom.

Therefore, it is important to look at tier 1 as the front line of defense. It is through tier 1

that general educators can impact the most students with research based curriculum and

high quality instruction. Instructional practices are subject to change when student

performance data indicates that the existing practices are not working.

Applied psychology has been on the forefront of evidence-based practice for

decades in an effort to improve patient outcomes by informing clinical practice with

relevant research. Evidence based practice refers to the application of scientific research

findings to the treatment of patients (Tanenbaum, 2005). One important role the

profession has played in implementing this practice is in the development of guidelines

for best practices (Chorpita, Daleiden, &Weisz, 2005). The American Psychological

Association (in partnership with the Board of Scientific Affairs, the Board of Professional

Affairs, and the Committee for the Advancement of Professional practices) developed the

Template for Developing Guidelines: Interventions for Mental Disorders and

Psychosocial Aspects of Physical Disorders in 1992 (APA Presidential Task Force on

Evidence Based Practice, 2006). This document described in detail the evidence

necessary to be considered in developing clinical practice guidelines. In 1995 the APA published a second set of criteria to identify empirically validated treatments. The publication came into being to establish the effectiveness of psychological treatments for certain disorders and to dispel common myths regarding psychological treatment being inferior to psychopharmacological treatment. This document sparked the interest of many additional groups within psychology as well as in related fields to determine the most effective way to conceptualize evidence based practice. Subsequently a variety of guidelines for recognizing evidence based practice have been developed to reduce wide variations in individual clinician's practices, eliminate worst practices, and enhance best practices ultimately improving outcomes for patients (Kratochwill, Clements, and Kalymon, 2007; Kratochwill and Shernoff, 2003). One of the most widely accepted evidence hierarchies adopted by APA Division 12 recommends the following criteria be met in order to call an intervention evidence based; rigorous evidence of efficacy and at least two randomized controlled trials or ten single

Tier 2: secondary prevention.

In tier 2, secondary prevention focuses on reducing the number of existing cases of at risk students by establishing efficient and immediate responses to academic struggles (Brown-Chidsey & Steege, 2005; Fuchs, Mock, Morgan, and Young, 2002; Gresham, 2002). Interventions are designed to support those students who are not responding to the primary prevention efforts in the general education classroom. A student may be identified for a tier 2 intervention based on routine screening data. For example Dynamic Indicators of Basic Early Literacy Skills (DIBELS) may be used as a screening instrument to determine whether a student meets grade level benchmarks for

reading. Tier 2 interventions typically involve small group instruction. Students with similar needs, determined through additional assessment, are placed in small flexible groups of 3 or 4. Students participate in tier 2 interventions for 6-9 weeks during which time progress monitoring data is collected weekly or every other week on each student (Brown-Chidsey & Steege, 2005; Batsche et al., 2007). Based on the collection and graphing of data, adjustments may occur to the instruction/curriculum) used with the student (s) and re-grouping may occur depending on student progress. On going analyses of data collected through progress monitoring enables educators to identify groups of students struggling in core academic areas and target them for instructional resources. Teachers are able to develop highly structured small group interventions to meet the group's needs through the use of the problem solving method. Frequency, intensity and duration are variables that are considered during intervention development, as the problem solving team must take into consideration number of days, length of time, and number of weeks the intervention will be offered. Once again research validated curriculum and highly effective instruction methods are used to deliver intervention services to identified students. These small group intervention services are provided to a select group of students; however, the small group services do not take the place of core curriculum. The intervention services are provided in addition to the high quality core curriculum that all students receive in tier 1. Students who improve their academic skills due to the intervention strategies used in tier 2, return to tier 1 status and have their academic performance frequently monitored. Those students making adequate progress with tier 2 interventions, but continue to need academic support not available in the general education classroom are referred to tier 3 for more intensive individualized

interventions. In addition, students who fail to make meaningful academic progress within tier 2 are referred to tier 3 (Batsche et al., 2007).

Tier 3: tertiary prevention.

The third tier of the RtI model is based on tertiary prevention, which focuses on reducing the intensity of student's specific academic problems that are resistant to primary and secondary prevention efforts (Marston, Muyskens, Lau, & Canter, 2003; Tilly, 2003). Tier 3 interventions cease to be group focused, and instead are designed to address an identified individual academic need. The interventions designed for students at this level are typically longer in term and become much more intense and concentrated in order to increase the possibility of a successful response. The focus of the problem solving team at tier 3 is to determine why the student has not responded to intervention in tier 2. Frequency, intensity, and duration are variables that are again considered throughout the problem solving process in relation to number of days, length of time, and number of weeks the intervention will be offered. The student's tier 1 and 2 data is reviewed and a comprehensive evaluation is done to further clarify the student's limited response to previous intervention. Individual diagnostic assessments are conducted to determine the level of the student's academic skills, which in turn inform the development of specific interventions that may not include special education.   In some cases however, when reviewing the data that reveals the student's academic progress over time (Tilly, 2003), it becomes evident that a student may have a problem that may warrant eligibility determination. At this time a multidisciplinary team working under IDEIA would be convened to determine if a disability exists and if special education is necessary for the student to maintain acceptable rates of academic growth.   The data

gathered in previous tiers of the RtI process is further used to continue the intervention development process regardless of whether the student is determined to be eligible for special education services.

To summarize, Tier 1 activities are comprehensive and universal. In this tier, all students receive research based, high quality education in the general education setting, on-going universal screening, and prescriptive assessment to design instruction. Tier 2 activities include evidence-based intervention provided to students identified as at-risk or who require specific supports to make adequate progress in the general education curriculum. Such interventions are supplemental to the core curriculum adding additional instruction, modeling, and practice to the students' day. Tier 3 activities include evidence-based interventions provided to students with intensive needs based on comprehensive evaluation. Interventions at this tier are also intended to supplement the core instruction that students receive on a daily basis. This level of intervention may increase the amount and/or intensity of supplemental instruction. Tier 3 is a transition point for students who have not yet found success in the general education curriculum alone, however it does not include special education services. If a student's rate of progress is not able to close the gap between the student and her/his peers, the child is considered for the first time as potentially disabled and would likely be evaluated for special education services. The level of intensity and duration increases as the student moves from tier to tier. Within each tier, educational decisions are made based on data derived from frequent monitoring of student performance and rate of learning (Batsche et al., 2007; Brown-Chidsey & Steege, 2005).

The primary goals of RtI are to identify cases early, facilitate access to intervention, ensure the delivery of quality instruction and the use of evidence based curricula, and frequently assess the outcome of interventions (Brown-Chidsey & Steege, 2005). The following features are core principles within RtI:

- All students receive research-based high quality classroom instruction (Gresham, MacMillan, Beebe-Frankenberger, & Bocian, 2000).

- All students are assessed early and often through universal screenings and progress monitoring (Bradley & Danielson, 2004; Fuchs & Fuchs, 2007).

- Increasingly intense tiers of research-based intervention are available to students who are identified to be at risk (Vaughn & Roberts, 2007).

- Individual student data is used to determine the appropriateness of a special education referral and/or as part of a comprehensive evaluation for students who do not respond adequately to instruction or who require ongoing intensive intervention to sustain growth (Batsche et al., 2007; Brown-Chidsey & Steege, 2005).

- Fidelity measures are used to ensure that intervention implementation occurred as it was intended (Gresham et al., 2000).

Ultimately, the RtI approach contributes to a better understanding of effective instruction and informed decision-making based on frequent data collection (Batsche et al., 2007). The framework enables school practitioners to systematically practice problem-solving methodologies in an effort to develop strong core instruction and move students through tiers of intervention to ensure that the needs of all students are addressed

(Gresham, 2002). The framework of RtI provides teachers with the opportunity for improved practice resulting in improved student outcomes.

Empirical support for RtI.

A body of research exists, primarily in the area of reading, to support the efficacy of RtI. Burns, Appleton, & Stehouwer (2005) conducted a meta-analytic review of four RtI models. Twenty-one studies were reviewed for effectiveness and outcomes associated with RtI. Student and systemic outcomes were examined and percentages of non-responders within the included studies were recorded. Four studies reported on the percentage of student populations within schools that were referred to or placed into special education. Approximately 6% of the student population received intervention via the RtI model and less than 2% were non-responders resulting in special education referrals. On average, 4% of students participating in intervention benefited.

Chard, Stoolmiller, Harn, Wanzek, Vaughn, Linan-Thompson, and Kame'enui (2008) conducted a study to examine the development of reading in 668 students in grades one through three within schools implementing multi tiered schoolwide prevention models of instruction in order to determine which variables are most predictive of later reading. A multilevel modeling procedure was used to examine the role of specific student achievement and demographic variables in first grade to predict end of year third grade reading proficiency. Students identified as at risk for reading difficulty in either kindergarten or first grade were followed until the end of their third grade year. Key predictor variables were examined to determine their validity for predicting initial status and growth on oral reading fluency, third grade oral reading fluency and third grade performance on a standardized test of reading. The results of the study show that oral

reading fluency (ORF) is a good predictor for third grade reading performance. Significant predictors of ORF included letter naming fluency (LNF) and alphabetic principles (AP) measures. These variables accounted for 75% of the ORF initial status variance. These findings illustrate the importance of using early literacy measures to identify students who need additional support as well as using those measures to narrow the instructional focus when developing interventions, both of which are key features embedded in multi tier RtI models of support.

Denton, Fletcher, Anthony, & Francis (2006) conducted a study with 27 student in grades one through three who demonstrated consistent deficits in reading. 14 of the students studied had demonstrated an inadequate response to tiers one and two of reading instruction. The purpose of the study was to evaluate the effects of an intensive tertiary reading intervention, therefore an intervention package involving decoding and fluency skills was delivered to all students in the study for 16 weeks. The first 8 weeks of the intervention involved instruction in decoding for 2 hours per day and the second 8 weeks involved instruction in fluency for 1 hour per day. At the end of the 16-week intervention, 33% of the students who had previously received enhanced classroom instruction only (Tier 2 intervention in this study), 38% of the students who had received only typical classroom instruction (Tier 1 intervention in this study), and 80% of the students who had previously received both enhanced classroom instruction as well as small group intervention in previous grades (tier 3 intervention in this study) responded to intervention as defined by a 0.5 gain in the WJ-III Basic Reading Skills cluster scores. Significant improvement was shown in multiple domains of reading and students began to close the achievement gap in the areas of reading decoding and fluency. This study

demonstrates that multi tiered intervention systems prove effective for students identified with severe reading difficulties.

Vaughn, Linan-Thompson, & Hickman (2003) found that a response to intervention model is an effective means for identifying students with learning disabilities. The researchers studied 45-second grade students identified to be at risk for reading difficulties. None of the students had previously, nor were they currently, receiving supplemental reading instruction. 10 or 20-week interventions were provided to students in the study by highly qualified tutors. Pre-determined exit criteria determined whether students exited the intervention after 10-weeks of intervention. The tutors taught students in groups of three who had similar reading knowledge and needs and focused on five essential elements of reading development; phonemic awareness, phonics, instructional level reading and comprehension, and spelling. Student in each group received 35 minutes of reading instruction daily in addition to the core instruction they received in their classroom. An intervention validity checklist was used to ensure fidelity of instruction throughout all intervention groups. As student progressed in their ability to read they were exited from intervention based on pre determined cut points. Progress was formally and informally monitored weekly with a variety of reading measures. 24 of the 45 students met exit criteria at some point during the intervention and 22 of those students continued to make gains in the general education classroom without supplemental reading instruction. The remaining two of the 24 students who were exited from the intervention, because of adequate progress, did not make even modest gains when returned to the general education reading curriculum alone, suggesting that they could be identified with an LD. Torgesen (2001) found similar outcomes with students

receiving intensive intervention services. Additional outcomes of the Vaughn, Linan-Thompson, & Hickman (2003) study indicate that fluency, passage comprehension, and rapid naming are significant in predicting intervention effectiveness.

RtI is simply a framework from which school practitioners can systematically practice problem-solving methodologies. It is through data driven problem solving that practitioners are able to move students through the RtI pyramid in order to effectively identify appropriate academic interventions that best meet the student's needs. RtI may be the most promising approach for decreasing the scope and severity of the difficulties encountered by students at risk for school failure (Batsche et al., 2007; Brown-Chidsey & Steege, 2005; Case, Speece, & Malloy, 2003) however, according to Reid (1987) that success can only be realized if the model is embraced and internalized by those expected to implement it. A certain amount of resistance is expected anytime change is introduced into a system therefore, it is imperative to have a good understanding of the complexities that surround change.

Understanding why teachers resist change is an important element to address when studying change. Teacher willingness or unwillingness to change may be the single determining factor whether an innovation is adopted or not Brown, Pryzwansky, and Schulte (2001). According to Zimmerman (2006), seven barriers to change must be considered when embarking on the change process including; failing to recognize the need for change, habit, previous unsuccessful efforts at change, fear of the unknown, threats to personal expertise/social relationships, and threats to personal allocations. Finley and Hartman (2003), Mendoza (1993), and Wickstrom and Witt (1993) cite similar barriers to change in their work. With any new innovation, resistance is ever

present as old, comfortable, personal traditions of teaching are pushed to the wayside and

a new way of thinking about teaching and learning is required (Finley & Hartman, 2004).

Resistance to Change

Integrating an innovation into teaching is a complex process, which is often met

with teacher resistance. Education, more than any other profession, is infused with

change at a significantly high rate. In the wake of research offering new and promising

practices regarding curriculum, instruction, or technology, educators are expected to

adopt the innovation without question as research vets out positive student outcomes

(Ellis, 2005; Marzano, Zaffron, Zraik, Robbins, & Yoon, 1995). Change is a constant

factor in education and teachers are frequently expected to accept change blindly with

little regard for professional expertise or opinions (Hord, 1990). Surprisingly, when

teachers are exposed to the latest innovation they often experience renewed hope that,

"this will be the thing that truly affects student outcomes" (Kline, Kuklis, & Zmuda,

2004). They cursorily move through the trainings, and when they hit their first road

bump they return to what seems to have worked in the past (Ellis, 2005; Kline et al.,

2004). Why? Because the "cookie cutter" approach is typically used in training teachers

(Tilly, 2003). This approach gives teachers all of the answers, it tells them how to think

and when to think it, provides the materials to be used and sends teachers off to

implement the innovation (Tilly, 2003).

Teachers, the most influential agents in educational innovation implementation,

typically have little, if any, choice in how implementation occurs resulting in a lack of

ownership or commitment to use the innovation (Tilly, 2003). Innovations introduced to

school faculties are often supported through research and promise positive student

outcomes (Marzano, Pickering, & Pollock, 2001), however, most schools do not have the

structures to adapt and adopt the scientifically based practices (Brandt, 1991; Schmoker,

2004). The educational community continues to want to attain positive student outcomes

and maintains an interest in the current research, however, the likelihood of successfully

adopting innovations and implementing them rigorously enough to realize positive

student outcomes has proven to be dismal at best (Hord, 1990; Schmoker, 2004).

In order to address individual attitudes, perceptions and feelings regarding an

innovation, a user-centered, participant-based approach may be the best model to

examine individual teacher concerns and the impact those concerns have on innovation

use (Bradshaw, 2002; Dusick & Yildirim, 2005; Finley & Hartman, 2004; Hall & Hord,

1987, 2001; Rogers, 2000). Such an approach would likely decrease teacher anxiety,

resulting in diminished resistance toward innovation adoption (Anderson & Reed, 1998).

The Concerns Based Adoption Model (CBAM; Hall et al., 1979; Hall & Hord, 1987;

2001) is just such a model that has been used in a number of research studies examining

the adoption of education innovations. The CBAM framework was developed on the

premise that the single most important factor in any change process is the people

involved, therefore, facilitating change means understanding the existing attitudes and

perceptions of those involved in the process (Hall & Hord, 1987, 2001).

Concerns Based Adoption Model of Change (CBAM)

The theory of change developed by Hall and Hord (1987) will be used in this

study to define the relationship between concerns experienced by teachers when faced

with RtI as an innovation and the impact those concerns have on innovation

implementation.   This model of change was chosen because it addresses teacher

attitudes, feelings, and beliefs that arise when faced with change. Additionally, Hall and

Hord's work was chosen because the original research population of teachers and college

faculties is similar to the population sample chosen for the current research study.

Hall and Hord's (1987) change model is focused on a psychological approach to

change. It is a framework and set of instruments from which to understand and manage

change in people. The CBAM approach to change has been in use for more than 30

years, in developing and evaluating reform efforts (Horsley & Loucks-Horsley, 1998).

This model posits that an innovation must be interwoven into the beliefs and basic

operating principles for whom the innovation is being proposed in order for the

innovation to be adopted successfully (Marzano et al., 1995). It is a theory of change that

describes, explains, and predicts the reactions of individuals most affected by

implementation of a new innovation (Constantinos, Eliophotou-Menton, & Philippou,

2004).

The Hall and Hord change theory (1987), along with the pioneer work done by

Fuller in the late 60's regarding concerns of teachers in training, lead to the development

of the Concerns Based Adoption Model (CBAM; Hall, Wallace, & Dossett, 1973) which

provides both a theoretical framework as well as the tools with which to assess the

perspectives of those implementing an innovation. Fuller (1969) identified a model of

concern based on three developmental stages-impact, self, and task concerns-which

established the framework for later work in the area of concerns (Ni & Guzdial, 2002).

Building on Fuller's work, Hall (1979) defined change as "an unfolding of experience

and a gradual development of skill and sophistication in the use of an innovation; a

developmental process." He defined an innovation as "any process or product that is new

to a potential user" (p. 203-204). Concerns are defined as "the composite representation of the feelings, preoccupations, thoughts, and considerations given to a particular issue or task" (Hall et al., 1986). According to Hall, Wallace, and Dossett (1973) concerns shift over time from concerns related to self, to concerns about task, and finally to concerns about results and impact. Therefore, change can be facilitated through the use of interventions aimed at addressing concerns held by innovation users (Hall & Hord, 1987). Teachers and other direct service personnel are seen as innovation users in the change process and administrative and other support personnel are recognized as change facilitators (Hall & Hord, 1987). Change facilitators provide assistance to the innovation users throughout the change adoption process to elicit successful use of the innovation and ultimately realize positive outcomes correlated with the innovation (Hall & Hord, 1987).

The CBAM examines the natural and developmental process experienced by every individual faced with the prospect of change in three distinct ways: Stages of Concern (SoC), Levels of Use (LoU), and Innovation Components (IC; Hall & Hord, 2001; Horsley & Loucks-Horsley, 1998). The SoC component is the hallmark of the CBAM work and addresses the personal side of change, the LoU defines how individuals are using the innovation, and the IC defines patterns of innovation use (Hall & Hord, 2001). The SoC tool measures the perceptions and feelings individuals have related to the innovation. The LoU tool assesses how teachers are actually using the innovations (Hall & Hord, 1987; 2001). The qualitative data obtained for the LoU is taken through observations and interviews (Hall & Hord, 1987). Finally, The IC tool is used to define patterns of innovations that result when different teachers implement the innovations in

their classrooms (Hall & Hord, 1987). Each component serves a unique purpose and

together provides a solid illustration of the adoption process delineated by Hall and Hord

(1987; 2001).

Hall and Hord (2001) have defined twelve assumptions that underpin all three

diagnostic dimensions of the CBAM model (a) change is a process, not an event; (b)

significant differences surround the development and implementation of an innovation;

(c) an organization does not change until the individuals within it change; (d) innovations

come in different sizes; (e) interventions are the actions and events that are key to the

success of the change process; (f) although both a top-down and bottom-up change can

work, a horizontal perspective is best; (g) administrator leadership is essential to long-

term change success; (h) mandates can work; (i) the school is the primary unit of change;

(j) facilitating change is a team effort; (k) appropriate interventions reduce the challenges

of change; and (l) the context of the school influences the process of change. These

underlying assumptions provide a basis for understanding change and must be considered

during the change adoption process.

The three dimensions of the CBAM (SoC, LoU, & IC) introduced previously are

essential to the model in introducing change, identifying concerns, and monitoring

innovation implementation (Hall & Hord, 1987; 2001). The dimensions will be more

fully examined in the following sections in order to explain their relationship to the current

study.

Stages of concern (SoC).

The SoC is thought to be the most significant diagnostic dimension of the CBAM

(Horsley & Loucks-Horsley, 1998) and is of specific interest in this study. Many change

facilitators have suggested that the SoC is the most helpful dimension for professional

development purposes (Horsley & Loucks-Horsley, 1998). It defines prospective users

concerns as composite representations of thoughts, feelings, preoccupations, and

considerations relating to a particular issue (Hall et al., 1979; Hall & Hord, 1987; 2001;

Horsley & Loucks-Horsley, 1998). Four broad stages of concern have been defined

within the SoC including unrelated concerns (concerns not related to the current

innovation), self concerns (concerns regarding how the innovation personally affects the

individual), task concerns (concerns about how the innovation is managed), and impact

concerns (concerns regarding how the innovation impacts others; Figure 2). Hall and

Hord's (1987; 2001) research further divides these four broad stages into seven specific

stages of concern; unrelated-awareness, self-informational, self-personal, task-

management, impact-consequence, impact-collaboration, and impact-refocusing. The

lower three stages (0-2) are centered on concerns for self, the middle stage (3) is focused

on mastery of tasks, and the upper three stages (4-6) are directed toward the results and

impact of the innovation (Hall & Hord, 1987; 2001). When presented with the threat of

change, all individuals' progress varies predictably through these specific stages of

concern in a developmental nature (Hall & Hord, 1987: 2001). However, not everyone

will progress through the stages at the same pace, nor will innovation adopters experience

the same intensity of a given concern. As concerns in the lower stages are addressed, the

individual is able to move to new levels of practice and later stages of concern become

more intense (Hall & Hord, 1987; 2001). How intensely an innovation user experiences a

concern depends on the kind and amount of assistance provided. If concerns are not

attended to, the innovation will never get past the personal stage and the innovation will

not be adopted (Hall & Hord, 1987; 2001). It is important to note that only well

established innovations reach the higher stage of impact. In order to measure these

individual concerns about an innovation, the Stages of Concern Questionnaire (SoCQ;

refer to Appendix A) is employed. The SoCQ generates stages of concern profiles for

individuals involved in the innovation adoption process. The concerns' profiles define

the most intense stage of concern for an individual and the array of concerns an

individual possesses regarding the innovation being adopted.

A number of studies have applied the CBAM framework to measure stages of

concerns in the educational arena. Such studies have examined feelings and perceptions

of prospective innovation adopters involved in the change process and have determined

types of interventions necessary to ease the change processes among teachers (Adams,

2002; Alias & Zainuddin, 2005; Atkins & Vasu, 2000; Bluhm & Kishner, 1998; Casey &

Rakes, 2002; Cheung & Ng, 2000; Constantinos, Eliophotou-Menton, & Philippou, 2004;

Dooley, Metcalf & Martinez, 1999; Holloway, 2003; Newhouse, 2001; Ni & Guzdial,

2002; Poynton, Schumacher, & Wilczenski, 2008; Vaughn, 2002). In addition to the

studies being done in the field of education, the CBAM SoC has also been applied to

research within health and mental health disciplines (Aarons, 2004; Aarons & Sawitzky,

2006). The SoC domain has helped staff developers understand characteristics of

potential innovation adopters and how those characteristics influence individuals' stages

of concerns (Aarons, 2004; Aarons & Sawitzky, 2006; Atkins & Vasu, 2000).

Figure 2

Stages of Concern about an innovation (adapted from Hall & Hord, 1987, p. 60; 2001, pp. 61 & 63).

Stage of Concern	
Impact	**Stage 6:** Refocusing. Exploring the possibilities of an innovation even considering major changes or replacement with an alternative. An individual at this stage will have definite ideas about options, additions, or replacements for the innovation. *"I have some ideas about something that would work even better."*
	Stage 5: Collaboration. The focus is on using the innovation with like-minded colleagues. *"I am concerned about relating what I am doing with what other instructors are doing."*
	Stage 4: Consequence. Consideration is on the impact of the innovation on students including student outcomes and performance. *"How is my use affecting kids?"*
Task	**Stage 3:** Management. The focus is on the actual tasks of using the innovation such as scheduling, time demands, organizing and managing the innovation. *"I seem to be spending all my time in getting material ready."*
Self	**Stage 2**: Personal. The focus is on the individual's ability to meet the demands of using the innovation and how the innovation might affect his or her role. *"How will using it affect me?"*
	Stage 1: Informational. The focus is on learning more about the innovation. *"I would like to know more about it."*
Unrelated	**Stage 0:** Awareness. Little or no concern regarding the innovation occurs as the individual has little or no involvement with the innovation at this time. *"I am not concerned about it."*

Level of use (LoU).

The LoU is a second dimension of the CBAM that focuses on general patterns of teacher behavior as it relates to a proposed innovation. More specifically, this dimension defines how much a teacher is using, or not using, an innovation. Because implementation of an innovation is a process rather than a dichotomous event, Hall and Hord (1987; 2001) developed the LoU, which is an eight level model describing the process through which all users progress.   The hierarchical levels range from nonuse to renewal during which time confidence in innovation use is gained, resulting in higher levels of innovation use. As described in figure 3, the eight levels of use include: non-use, orientation, preparation, mechanical use, routine, refinement, integration, and renewal. The LoU instrument is qualitative in nature and involves structured interviews and observations. Levels of an innovation's use are measured by the LoU interview. The focus of the LoU interview is on what innovation users do rather than on feelings, attitudes, and beliefs (Hall & Loucks, 1977). The data gathered through interviews and observations describes the behaviors of users and nonusers, which ultimately determines the level at which an individual is using an innovation (Hall & Hord, 1987; 2001). By determining a teacher's level of use, it is possible to plan an implementation strategy that will reduce the time to adopt RtI.

The CBAM researchers (Hall & Hord, 1987) developed two instruments for measuring a teacher's level of use. One is an interview with an accompanying scoring procedure and the second is a protocol for a brief "branching interview" that focuses on key decision points and the changes teachers make in their use of the innovation. A significant limitation to using this dimension of the CBAM is that the interviews are

extremely time-consuming and Hall and Hord (1987; 2001) require a three-day training

and certification program in order to utilize the LoU. Due to these constraints in using

the LoU to collect data, the behavioral aspect of RtI innovation use will be measured with

the Level of RtI Use Questionnaire (LRIUQ; refer to Appendix C)

Figure 3. Levels of Use (LoU) of an innovation (adapted from Hall & Hord, 1987).

Level		Description
0	Non-Use	State in which the user has little or no knowledge of the innovation, no involvement with the innovation, and is doing nothing toward becoming involved
I	Orientation	State in which the user has acquired or is acquiring information about the innovation and or has explored or is exploring its value orientation and its demands upon user and user system.
II	Preparation	State in which the user is preparing for first use of the innovation.
III	Mechanical Use	Sate in which the user focuses most effort on the short-term, day-to-day use of the innovation with little time for reflection. Changes in use ar made more to met user needs than client needs. The user is primarily engaged in a stepwise attempt to master the tasks required to use the innovation, often resulting in disjointed and superficial use.
IVA	Routine	Use of the innovation is stabilized. Few if any changes are being made in ongoing use. Little preparation or thought is being given to improving innovation use or its consequences
IVB	Refinement	State in which the user varies the use of the innovation to increase the impact on clients within immediate sphere of influence. Variations are based on knowledge of both short-term and long-term consequences for clients.
V	Integration	State in which the user is combining own efforts to use the innovation with related activities of colleagues to achieve a collective impact on clients within their common sphere of influence.
VI	Renewal	State in which the user re-evaluates the quality of use of the innovation, seeks major modifications of or alternatives to present innovation to achieve increased impact on clients, examines new developments in the field, and explores new goals for self and the system.

The questionnaire was developed for this study and will be discussed in more detail later.

It was designed to quantitatively gauge the level of RtI integration into classrooms, grade

spans and schools. Although the CBAM LoU dimension is not being used in this study,

the concepts that it represents are present within the LRIUQ, therefore, the LoU

dimension is described.

Innovation configurations (IC).

The Innovation Configurations (IC) is the final dimension of the CBAM. This

tool was developed in order to define valid examples of intended outcomes as teachers

were rarely implementing the same innovation in exactly the same way (Anderson,

1997). The IC is a planning and monitoring tool created by stakeholders to describe the

ideal ways to use a specific innovation (Hall & Hord, 1987). Specific procedures have

been developed to assist in the development of an IC.   An IC is developed to clearly

describe the innovation and its operational forms. A two dimensional chart of the

innovation is produced via existing documentation and a series of components are

constructed to define the intended outcomes of the innovation. The components must

represent the innovation fully and successfully. For each component a range of variations

representing a less than satisfactory implementation is described.

These three tools may be used in a variety of ways in order to meet the needs of

the study being conducted. All of the tools may be used together, each individual tool

may be used alone, or they may be used in any combination with one another (Hall &

Hord, 1987). Although researchers have used the CBAM framework to conduct a

number of studies, the SoC is by far the most widely used diagnostic dimension to

examine change (Adams, 2002; Alias & Zainuddin, 2005; Atkins & Vasu, 2000; Bluhm

& Kishner, 1998; Casey & Rakes, 2002; Cheung & Ng, 2000; Constantinos, Eliophotou-

Menton, & Philippou, 2004; Dooley, Metcalf & Martinez, 1999; Holloway, 2003;

Newhouse, 2001; Ni & Guzdial, 2002; Poynton, Schumacher & Wilczenski, 2008;

Vaughn, 2002). Few researchers have studied change utilizing the LoU dimension of the

CBAM (Finley & Hartman, 2004; Gershner & Snider, 2001; Giancola, 2001) or the SoC

and LoU dimensions together (Marsh, 1987; Gershner & Snider, 2001). Fewer yet have

actually incorporated the IC into their studies (Hope, 1997; Mills, 2002; Schiller, 1991).

Since the relationship between concerns and use of innovation adoption are a focus of

this study, this section will discuss currently available research that addresses these two

domains of the CBAM.

CBAM Studies

The CBAM is a widely accepted comprehensive theory of change, which has

applied largely to educational innovations, most of which include the use of technology

(Anderson, 1997). The model is descriptive and predictive of teacher concerns and

behaviors related to changes made in curriculum and instruction. A limited amount of

research to date examines both the level of innovation use and innovation concerns.

However those studies that do examine both domains, demonstrate the relationship

between the two key constructs. The SoC and LoU are designed to probe the same

innovation, however, the way they evaluate the given innovation is appreciably different

(Newhouse, 2001). Selected CBAM studies incorporating measures of teachers' SoC and

LoU, which have been found to be relevant to the current study, will be discussed.

Evans and Hopkins (1988) studied school climate and teachers' psychological

state on their level of use of new educational ideas and practices. Thirty elementary

school teachers involved in implementing aesthetics education participated in the study.

Teachers' psychological states were rated according of Maslow's hierarchy of needs and

school climate measures were obtained from each teacher. Level of aesthetics education

implementation was assessed with one LoU interview and an observational scoring

device. The outcomes of the study suggested that the greatest number of educational

ideas came from teachers who operate at a higher psychological level and teach in a more

open, democratic school climate. The psychological level of teachers' was measured

based on an interview and the interviewers rating of the teacher on Maslow's hierarchy of

needs. Those teachers who had the highest psychological ratings tended to have routine

levels of use, those with midrange psychological ratings and implementation scores

reported mechanical levels of use, and those with the lowest psychological levels were

mostly non-users. The teachers with the highest level of use also tended to rate their

school as more democratic, collegial, and open to change on the school climate measures

than teachers at lower psychological levels. Although this study did not employ the

SoCQ, it nonetheless shows a parallel progression between psychological state and use,

similar to the progression Hall and Hord (2001) expect to find between stages of concern

and levels of use.

Marsh (1987) conducted a study of 8 elementary school teachers involved in

adopting a new social studies curriculum. The SoCQ and LoU interviews were

administered at the beginning and end of the school year. Both times the dimensions

were administered, the teachers reported a concerns profile typically associated with

nonusers of a change who have a definite idea about alternatives to the innovation. The

Level of Use findings, however, were consistent with innovation use. The interview data

indicated an obvious shift from predominantly mechanical levels of use at the beginning

of the year, to routine, refinement, and integration levels of use by the end of the year.

Although Marsh did not address this discrepancy in his study, it indicates a need for

additional research regarding the relationship between teacher concerns and their use of an innovation.

In an attempt to understand how professional development affects technology innovation adoption, Dooley, Metcalf, and Martinez (1999) used naturalistic inquiry to study 13 teachers. They found that the high level technology users had higher order concerns in the impact and task stages, low technology users had lower order concerns in the self stage, and medium users had a mixture of concerns. The outcomes of this study support Hall and Hord's (2001) findings regarding the correspondence between SoC and LoU. They posit that at early stages of innovation adoption, lower stages of concern are present and lower levels of use occur. During this time concerns drive use. Conversely at later stages of adoption, higher stages of concern are present as are higher levels of innovation use. Innovation use drives concerns at this time in the adoption process.

Edmonsond, (2005) studied 11 elementary school teachers to compare the effectiveness of a telepresence-enabled cognitive apprenticeship model of teacher development to that of a traditional workshop model. The teachers were divided into experimental and control groups and the SoCQ and LoU dimensions of the CBAM were used to measure the degree to which teachers in both groups enacted mathematics pedagogy. The experimental group was exposed to a telepresence-enabled cognitive apprenticeship model of teacher professional development (TEAM-PD) and the control group was provided a traditional workshop model of professional development. The SoCQ was administered to teachers in both the experimental and comparison groups on two occasions, once at the beginning of the research and once at the end. Both times the dimensions were administered the teachers in both groups, reported concerns profiles

typically associated with nonusers of a change who have a definite idea about alternatives to the innovation. In regard to use of the innovation, the comparison group of teachers reported few substantive changes in their classroom instruction. Teachers in the experimental group, however, routinely implemented the instructional strategies taught throughout the professional development and were adapting and modifying them in new ways to maximize effectiveness. The researcher indicated that the incongruity between teachers concerns and levels of use might be a result of the small number of teachers studied. Similar to the findings described previously by Marsh (1987), Edmondson's (2005) results indicate a need for additional research regarding the relationship between teacher concerns and levels of innovation use.

Hall and Hord (2001) describe a predictable relationship between SoC and LoU. They describe a one-to-one correspondence between the two dimensions, which allows for predictions to be made statistically. For example, if a person is a non-user of an innovation s/he is likely to have more intense self-concerns. If a person is at LoU level V, Integration (personal efforts are combined to use the innovation with related activities of colleagues to achieve a collective impact on students) it can be predicted that s/he is likely to have aroused Impact Concerns (focus is on what is happening with students and what the teacher can do to be more effective in improving student outcomes). In addition, Hall and Hord (2001) hypothesize that at the lower levels of use, actions cause the arousal of concerns (teacher attends orientation training and concerns about how the innovation will affect her/him personally increase) and at the higher levels of use, concerns drive use (teacher is concerned that a student is not doing well, teacher acts to learn about alternative approaches to more effectively instruct student). Although the

studies presented here demonstrate a relationship between the constructs of concern and use as it pertains to innovation adoption, only the study conducted by Dooley, Metcalf, & Martinez (1999) had outcomes that showed a clear positive relationship between concerns and use, similar to those espoused by Hall and Hord (2001).

All of the other studies indicated a negative relationship between teachers' concerns and their levels of use. It appears that the difference in relationship between the SoC and LoU depend on the innovation being studied. In 1987, Hall and Hord recommended that future research include studies designed to refine and extend CBAM theory, including studies to examine the relationships between SoC and LoU during innovation implementation. The current study is designed to explore the relationship between SoC and LoU as it pertains to RtI implementation.

Demographic Characteristics Studies

The research on the relationships of demographic variables and individuals' stages of concerns is limited and inconclusive. Hall et al. (1979) reported that category membership within traditional demographic variables have no significant relationships with concerns, however, when examining the literature other researchers have found that category membership within demographic variables (age, gender, years of experience and level of degree) can indeed correlate with concerns (Adams, 2002; Newhouse, 2001). Therefore, it seems plausible that for the adoption of the RtI innovation, category membership within demographic variables may be predictive of user concerns. Ni and Guzdial (2008) reported that individual-level variables impact willingness to adopt an innovation; therefore attending to these variables is crucial when embarking upon the change process.

Garland, Kruse, and Aarons (2003) conducted a qualitative study of 50 mental health practitioners representing a variety of disciplines to determine the effect attitude has on adoption of evidence based practices. Focus groups and individual interviews were conducted and each participant completed a self-report questionnaire. The study indicated that individuals with limited experience are more willing to adopt evidence-based practices than practitioners with more extensive work experiences. Specifically the study identified interns as being the least resistant to the idea of change, presumably because interns are in the process of shaping their habits of practice.

The primary discipline in which a professional is trained may also affect how an individual adopts change. According to Pithouse and Scourfield (2002), individuals who have specialized training are less likely to acquire a new skill offered through innovations. Aarons (2004) conducted a study with 322 public sector clinical service workers providing mental health services to children and their families. Participants represented a number of different disciplines with widely varying levels of education and experience. A brief measure of mental health provider attitudes toward adoption of evidence-based practices (EBP) was developed, and attitudes were examined in relation to individual and organizational differences. The study revealed that provider attitudes toward adoptions of EBPs varied in relation to educational level, level of experience, and organizational context. Practitioners who were interns were more open to adopting an EBP innovation compared to professional service providers.   Level of educational attainment was also associated with positive attitudes toward adopting EBP innovations. Those individuals who had attained the least amount of education were more open to

adopting an innovation. The study did not find any significant differences across

disciplines in their attitudes toward adopting an innovation.

Research conducted by Aarons and Sawitzky (2006) studied 301 public sector

mental health service providers representing four mental health disciplines with various

amounts of education and experience. Their research revealed that providers earlier in

their careers, older in age, and with higher educational attainment were more open to

adopting an innovation. Conversely, providers who had been working in a program for

longer periods of time were less ready to adopt an innovation. Livneh and Livneh (1999)

conducted a study of 256 K-12 teachers. They found that those teachers with lower

levels of formal education were more ready to adopt an innovation as they participated in

more professional development.

Lau and Shiu (2000) conducted a study with 377 teachers attending a Territory

Wide System Assessment 2008 Primary 6 English Oral Examiners' Training Workshop.

All of the participants had a minimum of three years of relevant teaching experience.

The SoC Questionnaire was administered to all participants to determine the sources of

resistance teachers have toward an innovation. The study revealed that participant age

and teaching experience had a significant influence on whether teachers were ready to

adopt an innovation.   Participants between the ages of 27 and 32 showed signs of being

more ready to adopt the innovation than their cohorts and teachers who had 6 to 10 years

of teaching experience were also more ready to adopt the innovation than their peers.

Alshammari (2000) studied 248 teachers in intermediate schools in Kuwait to

examine the relationships among teachers' reported stages of concern and other factors,

such as gender and experience. The study revealed that female teachers had higher

concerns related to the collaboration and information stage with low awareness concern, whereas male teachers reported high collaboration and refocusing concerns, with minimal management concerns. Teachers with more teaching experience developed higher levels of concerns at the impact stage and teachers with less experience reported lower self or management concerns. This finding supports the concerns theory in the observation that, with more experience with the innovation, teachers develop higher levels of impact concerns. The researcher applied MANOVA to test significant relationships between teachers' stages of concern and factors such as gender and experience. Statistically significant differences were found between females and males at management and refocusing stages, females had higher concerns on management and males had higher refocusing concerns. No significant relationship was found between experience and the reported stages of concern.

The preceding studies reveal significant outcomes regarding the relationships of teacher concerns and teachers' individual characteristics. The outcomes suggest that teacher concerns vary by age, gender, years of experience, and level of degree. Therefore, these individual factors may influence an individual's stage of concern and may be a key to understanding what type of support would assist in her/his progression to more sophisticated stages resulting in higher levels of innovation use. Various studies have mixed results on whether age, gender, years of service, and level of degree are related to change adoption. These variables will be included in the current study as demographic variables typical in cross-sectional studies, and their relationship with teachers' stages of concern profiles regarding RtI examined for possible relationships.

As we understand more about the impact early identification and intervention has

on student academic success, the field of education has sought alternative approaches to the traditional practices of child find. Although alternative models to identify LD have been researched and show great promise (Batsche et al., 2007; Burns & Ysseldyke, 2005; Ellis, 2005), the innovations themselves remain insignificant without teacher willingness to embrace and implement them into their teaching practices (Marcinkiewicz, 2000). Understanding the relationship between concern and use as well as what personal factors affect teacher concerns regarding change adoption are therefore key elements in innovation adoption (Marcinkiewicz, 2000). Vaughn (2002) recognizes the teacher's role in the change adoption process as crucial, depending on preconceived notions about the innovation as well as attitude about change within the school. The challenge that lies ahead revolves around the ability and willingness of faculty members to embrace the change. Understanding teacher concerns and levels of use related to adopting an innovation will ultimately promote the facilitation of the change process (Marcinkiewicz, 2000). Studies to date concerning change have had a primary focus on organizational factors, and although these are important constructs necessary to address in the change process, additional aspects such as individual teacher factors may be equally important. As these factors have been largely overlooked in the change literature (Marcinkiewicz, 200; Vaughn, 2002) a need exists to examine individual factors regarding the change adoption process.

Purpose of the Study

      This study extends previous work by examining the individual teacher factors that impact concerns regarding adoption of RtI as a policy change. In addition, the study will examine the relationship between teacher concerns regarding RtI and level of RtI use. By

determining a teacher's stage of concern and her/his level of use, it is possible to plan an implementation strategy that will reduce the amount of time it takes for a teacher to adopt RtI. No example in the reviewed literature specifically addresses predictors of stages of concerns profiles for teachers adopting RtI. In order to better design support structures and programs that will facilitate the successful adoption of RtI and minimize faculty frustration, anxiety, and resistance, an understanding and appreciation of faculty member's concerns and level of RtI use is essential (Hall & Hord, 1987, 2001; Pajo & Wallace, 2001; Surry & Land, 2000). This study may have practical implication for the field of education, as it pertains to addressing teacher concern related to RtI use. Outcomes, may offer information to assist change facilitators in gaining a better understanding of concerns related to RtI implementation and resulting intervention development to support individuals and groups of teachers experiencing similar stages of concern and ultimately increasing levels of RtI use to positively affect student outcomes. The following research questions will be examined in this study.

Study Research Questions

Question #1:   Is teacher concern for RtI significantly predictive of level of use of RtI ?

Hypothesis #1: As a teacher's level of concern increases, the level of RtI use increases.

Question #2:   Are participants' status on particular demographic variables significantly predictive of stages of concerns?

Hypothesis #2: Participants' status demographic variables will significantly predict stages of concern.

CHAPTER THREE

Method

This chapter addresses (1) population and sample size, (2) variables and

instrumentation, and (3) data collection procedures.

Participants

The participants for this study (N = 120) were recruited from a population of K-

12 teachers from three school districts located in west central Iowa. Each school district

is comprised of an elementary school, a middle school and a high school, resulting in a

total of six schools from which to recruit study participants. During the previous school

year, teachers in all three school districts had participated in 6 hours of initial mandatory

training regarding RtI and were in the early stages of change adoption. This group of

teachers represents various schools currently receiving services from Heartland Area

Education Agency (AEA) 11, a regional intermediary service provider. Iowa AEAs are

regional service agencies that were created by the Iowa Legislature to work as

educational partners with schools to ensure equal educational opportunities for all

children through a vast array of programs, services, and resources (Iowa Area Education

Agencies, 2010). The participants in this study were elementary and secondary school

teachers, all of whom volunteered to respond to the SoCQ and LRIUQ. The sample was

chosen from teachers who were currently participating in a formal professional

development opportunity through Heartland AEA11.

The sample studied consisted of 120 teachers with a mean age of 41. The

majority of the teachers were tenured (56% n = 67), females (68% n = 82), trained at the

bachelors degree level (75% n = 90). The demographics characteristics of the sample are

summarized in Table 1.

Table 1

Descriptive Characteristics of the Sample

N (Sample Size)	N = 120
Gender	
Male	n = 38
Female	n = 82
Level of Degree	
Bachelors	n =90
Beyond Bachelors	n = 30
Years of Service	
Non-Tenured	n = 53
Tenured	n = 67

Data Collection Procedures

Prior to soliciting teacher participation in the study, the primary investigator met

with district superintendents to gain permission to recruit teachers from each district to

participate in the study. Each superintendent signed a permission letter (Appendix E) to

this effect. In addition, the University of Missouri's Institutional Review Board

(Appendix F) as well as Heartland AEA11's research committee approved the research

proposal (Appendix G). All involvement in the current research project required

voluntary participation. All participants were asked to participate in the study during a

mandatory district wide training involving all three school districts. This was the

participants' first training opportunity in RtI through Heartland for the 09-10 school year.

The training involved an overview of progress monitoring techniques, data analysis, and

goal setting. The previous year all participants had completed six hours of initial training

regarding RtI. The primary investigator attended the first professional development

opportunity and explained the study to participants (Appendix I for recruitment script).

Each participant signed a consent form to participate in the research (Appendix H).

After all consents were collected the primary researcher passed out the paper and pencil

SoC questionnaire for completion. The participants were asked to write a code at the top

right hand corner of the questionnaire for later data entry. The code consisted of the first

letter of the participant's first name and the last four digits of her/his telephone number.

An explanation of the Likert scale used to respond to questions on the questionnaire was

given. The participants were asked to complete the questionnaire and raise their hand

when they had completed all questions. As participants finished the questionnaire, the

primary researcher picked them up and thanked them for their participation. Participation

rate was 100% at initial completion. At the onset of the second professional development

opportunity, three months after the SoCQ was administered, the primary researcher

reminded the participants of their voluntary involvement in the study. All participants

were given the Level of RtI Use Questionnaire (LRIUQ) and were asked to write their

code described above on the upper right hand corner of the questionnaire. The Likert

scale used to respond to questions was explained to participants and participants were

asked to complete the questionnaire. As participants finished the questionnaire, the

primary researcher picked them up, and thanked them for their participation. An attrition

rate of 7% occurred between questionnaire administrations resulting in a final sample of

120 (N =120).

Instrumentation

   Stages of concern questionnaire.

   The Stages of Concern Questionnaire (SoCQ) is a 35-question, eight-point $(0-7)$

Likert-scale instrument indicating the degree of present concerns, with a completion time

of approximately ten to fifteen minutes (Hall et al., 1979). The SoCQ is provided in

Appendix A. Hall, George, and Rutherford developed the SoCQ in the 1970's at the

Research and Development Center for Teacher Education (RDCTE) at the University of Texas at Austin (Hall et al., 1979) and defined seven specific stages of concern; unrelated-awareness, self-informational, self-personal, task-management, impact-consequence, impact-collaboration, and impact-refocusing. The lower three stages (0-2) are centered on concerns for self, the middle stage (3) is focused on mastery of tasks, and the upper three stages (4-6) are directed toward the results and impact of the innovation (Hall & Hord, 1987; 2001). The SoCQ has been used in a variety of studies conducted in educational settings (Casey & Rakes, 2002; Holloway, 2003; Ni & Guzdial 2002; Poynton, Schumacher, & Wilczenski, 2008; Vaughn, 2002) since it was initially developed and validated.

Initial exploratory work expanding on Fuller's (1969) theory regarding individual's concerns about innovations began with the use of open-ended questions, Likert scales, interviews, and checklists. The original SoCQ was a result of the RDCTE staff generating 544 potential items for use on a quantitative instrument. These items were reduced into a 195 question pilot instrument using definitions outlined in the original CBAM/SOC paper, which hypothesized that the four stages of concern (unrelated, self, task and impact) as identified by Fuller (1969) could be further delineated into seven categories within these four broader stages (Hall, Wallace, & Dossett, 1973). In 1974, the pilot instrument was given to a sample of teachers and college faculty stratified according to years of experience. The teachers and college faculty members answered statements based on their concerns about their involvement with teaming in elementary schools and instructional modules in colleges respectively. Three hundred and sixty-three questionnaires were returned and subscales were created.

Item correlation and factor analysis indicated that seven categories (unrelated-awareness, self-informational, self-personal, task-management, impact-consequence, impact-collaboration, and impact-refocusing) within the four hypothesized stages of concern (unrelated, self, task and impact) explained over 60% of the common variance among the 195 items. Using this data, the RDCTE staff developed a 35-item questionnaire created from the five most heavily loaded items for each of the seven categories within the four broader stages of concern from the factor analysis. During the next two years, the 35-item questionnaire was used in cross sectional and longitudinal studies of 11 education innovations. Several validity studies were explored. For example, respondents were interviewed about concerns and the concerns were rated. Those ratings were then contrasted with the SoCQ data. Individuals were asked to respond to the SoC stage definitions and to indicate their relative intensity of concern (Hall et al., 1973). LoU interview tapes were also analyzed to determine concerns. The SoCQ data were interpreted and predictions were made about what concerns each respondent expressed in an interview. Those predictions were compared to actual interview data (Hall et al., 1973). Finally, extensive dialogue and interaction helped the project staff develop and refine procedures for interpreting the data (Hall et al., 1973).

Evidence of the initial reliability of the SoCQ instrument was conducted with a sample of 830 teachers and higher education faculty members. As a measure of internal consistency, an intercorrelation matrix was developed to examine how questions correlated with one another within each stage of concern. This comparison resulted in internal reliability coefficients for the seven categories (0-6) from a low of .64 to a high of .83 (see Table 3). Cronbach's Alpha, which is used to calculate the internal reliability

of an instrument, ranges from 0 to 1.0. Alphas of .70 or greater are usually the standard

in social science literature, though lower alphas are sometimes reported. Alphas of below

.60 generally considered to have unacceptable reliability, whiled alphas above .70

suggestive of acceptable reliability (Pallant, 2005). Test retest reliability was also

conducted resulting in correlation coefficients ranging from .65 to .86. Additional studies

conducted from 1979 to 1991 from various authors indicate coefficients of internal

consistency ranging from a low of .50 to a high of .86 (Barucky 1984; Hall et al., 1979;

Hall, Newlove, Rutherford, & Hord, 1991; Jordan-Marsh, 1985; Kolb, 983; Martin, 1989;

Van Den Berg & VanDen Berghe, 1981). Initial reliability coefficients determined for

the seven hypothesized categories within the more broadly defined stages of concern are

moderate to strong for a seven-category structure. Other researchers have also noted that

while there is compelling evidence that the broad categories of concerns (unrelated, self,

task, and impact) are present during the innovation process, that dividing these broader

stages into the categories proposed by Hall, George & Rutherford (1979) may be

problematic for all innovation contexts (Adams, 2002; Bailey & Palsha, 1992; Martin,

1989; Shotsberger & Crawford, 1996).

Table 2

Coefficients of Internal Consistency for the Stages of Concern Questionnaire (SoCQ)

Broadly Defined Stage	Unrelated	Self		Task	Impact		
Category	Unrelated	Self-Informational	Self-Personal	Task-Management	Impact-Consequence	Impact-Collaboration	Impact-Refocusing
Original Alphas	.64	.78	.83	.75	.76	.82	.71

Note. Modified from: Hall, G. E., George, A.A., and Rutherford, W. A. (1979). Measuring stages of concern about the innovation: A manual for use of the SoC questionnaire (p. 11).
N = 830

To establish initial evidence of construct validity of the SoCQ, the RDCTE staff used inter-correlation matrices and extensive interview data. During a series of validity tests of the SoCQ, the researchers reported that the scores on the SoCQ related to each other with correlation coefficients ranging from .19 to .82, further information on the type of validity study was not available in the technical manual. The evidence provided indicated that the items on a particular scale measured a construct distinct from other constructs measured by other scales (Hall, George, and Rutherford, 1979). An initial correlation matrix based on a pilot study in 1974, which indicated an ordering pattern within the concerns profiles consistent with the hypothesized SOC (Hall, George & Rutherford, 1979). This hypothesized pattern begins with self-concerns being most intense prior to and at the onset of innovation adoption. With time and intervention these concerns reduce in intensity making way for task concerns, which increase with intensity and eventually decrease, leading to impact concerns thus higher levels of innovation adoption (Hall & Hord, 2001).

In 1976, 65 K-12 educators and college professors were selected at random from a group who had completed the SoCQ previously. These participants were interviewed and given open-ended statements that closely matched the questions on the SoCQ. The raw scores on the SoCQ and judge's assessment of the participant's concerns were examined, indicating a relationship between the SoCQ raw stage score and the intense concerns of individuals (Hall et al., 1979). According to Hall, George and Rutherford (1979), the most convincing demonstrations of the validity of the SoCQ occurred during a two year, longitudinal study of teachers in a single school who were moving from not teaming to using teaming routinely during this time. As hypothesized by Hall et al. (1979), concerns

over this period of time shifted from initially being high on the lower SOC cluster (0, 1,

2) to being higher on the management (4) and the impact (5) clusters later in the study.

The validity studies conducted increased the RDCTE researchers' confidence that the

SoCQ is a valid measure of teacher concerns. Hall and colleagues (1986) were able to

show that there was a low-moderate to strong intercorrelation between the constructs

measured, with coefficients from .42 to .85, indicating that the SoCQ measures the

constructs it was intended to measure. Therefore, the validity evidence for the SoCQ is

strong enough to proceed with the use of the survey.

The validated SoCQ is a 35-item, Likert-scale instrument designed to measure

concern related to a specific innovation (Hall et al., 1979). A score is created by

summing the responses of the five questions that measure each of the proposed categories

(unrelated awareness, self-informational, self-personal, task-management, impact-

consequence, impact collaboration, impact-refocusing; refer to Appendix B) within the

broadly defined stages of concern (unrelated, self, task and impact). Each category score

ranges from 0 to 35, and the higher the score in a given stage of concern, the more intense

the concerns are at that stage; the lower the score in a given stage, the less intense the

concerns are at that stage. Higher and lower are not absolute; however, but relative to the

other stage scores for the individual when constructing SOC profiles. The SoCQ can be

used to construct individual or group concerns' profiles by taking the raw score for each

stage and converting the score to percentiles following the guidelines outlined in the

technical manual, which provides both scoring and interpretation information (Hall et al.,

1979; Hall & Hord, 2001). Graphic representations of percentile scores can assist in

interpretation of SoCQ data; however, when using statistical analysis procedures, the use

of raw scores is preferable (Hall et al., 1979). When working with group data, Hall et al.,

(1979) and Hall and Hord (1987; 2001), recommend using the peak stage of concern

based on the groups' scores. One way of looking at group concerns is to combine

individual data by developing a profile that provides the average scores for each stage of

the individuals in a group, as group averages will typically reflect the dominant high and

low SOC of the group. Peak concern stages and percentile rankings can be determined

for respondents, and percentile tables exist to convert raw stage scores to percentile

figures (see conversion chart, Hall et al., 1979). From the percentile figures, SOC

profiles can be plotted that identify the peak, or most intense, stages of concern and the

relative intensity of other concerns (Hall et al., 1979).

Demographics questionnaire.

Demographic questions (Appendix D) related to age (defined as a chronological

age of the faculty member—continuous variable), gender (defined as whether the faculty

member is male or female), year taught (defined as years of service) and highest degree

(defined as whether the faculty member holds a bachelor's degree or a degree beyond a

bachelor's degree) were asked in a questionnaire format. These variables were included

in order to determine if they were predictive of particular survey responses.

Level of RtI use questionnaire (LRIUQ).

The CBAM LoU diagnostic dimension consists of structured interviews and

observations. Interview and observation information is used to determine a level of use.

A two-dimensional interview-rating sheet provides a general description of behavior that

indicates each level of use. The LoU rater would then use interview and observation data

to determine a teacher's level of innovation use.

Due to the qualitative nature of the LoU dimension developed by Hall and Hord (1987), the LRIUQ (refer to Appendix C) was developed for this study. The LRIUQ was constructed to quantitatively gauge the level of RtI integration into classrooms, grade spans and schools. Upon reviewing the RtI literature, a number of self-assessment tools were identified and used in the development of the LRIUQ (Department of Public Instruction, 2009; Illinois State Board of Education, 2009; Mellard & McKnight, 2007; Shinn, 2009; Vermont RtI Implementation Initiative, 2007; Wright, 2006). The LRIUQ is a 27-item measure that prompts teachers to respond to each item on an 8-point Likert type rating scale ranging from 0, not true of me now to 7, very true of me now. The eight-point scale used for this measure parallels the eight-point scale used in the SoCQ that teachers were familiar with after completing the measure during the first period of data collection. The LRIUQ was designed to evaluate to what extent individuals implement RtI. High numbers indicate high levels of use, low numbers indicate low levels of use, and 0 indicates that the item was irrelevant to the respondent.

The items that make up the LRIUQ are based on the key elements discussed earlier in the RtI literature review including; curriculum, instruction, data, and decision-making. Initially, the researcher compiled statements from the various RtI self-assessment tools referred to previously.   Upon analyzing the statements, those with similar meanings were combined and those targeting groups or systems were removed. This process resulted in a 27-item measure. Items representing the concept of curriculum include ideas about research-based curriculum, matching curriculum to need, analysis of core curriculum, and goal setting. The concept of instruction is reflected in items describing amount of time instructing, multiple opportunities for response, standards-

based instruction, and adjusting instruction. Data related items include progress monitoring practices, screening, and data analysis. Items representing the concept of decision-making include decision-making rules, collaboration, and flexible grouping.

Initial attempts to establish face validity for the LRIUQ included consulting the RtI literature for existing measures and definitions and incorporating that information into the measure. In addition, faculty pilot participants who were not in the sample reviewed the instrument. In an attempt to establish content validity, experts in the area of RtI reviewed questions to help ensure that elements integral to the concepts of RtI were identified and measured by the questions. This group of people consisted of school psychologists with 10 or more years of experience working with schools on the implementation of RtI. All of the expert reviewers are currently serving in administrative roles including director of psychological services and department directors. The feedback provided to the researcher by the pilot participants and the subject matter experts was incorporated into the statement construction.

In order to obtain feedback about the structure and individual questions within the LRIUQ instrument, a convenience sample of 10 faculty members, who were not included as part of the sampling group, were identified and asked to complete the instrument and comment about the questions, directions, and length of the survey. Faculty members who participated in the pilot testing were administered the questionnaire at the end of a faculty meeting. The 10 faculty members who were personally approached by the researcher including: two first grade teachers, two second grade teachers, one third grade teacher, one fourth grade teacher, two fifth grade teachers, and two sixth grade teachers - all of whom were from an elementary school in which the researcher provides services.   One

hundred percent of those approached completed the pilot survey and commented on the

instrument. All of the respondents were pleased with the amount of time it took to take

the questionnaire (approximately 5 minutes) and the instructions were reported to be very

straightforward and easy to follow. Three participants commented on the same spelling

error and all ten participants reflected in some manner that the measure asked questions

about all of the important concepts related to RtI as they understood them.   Internal

consistency conducted by correlating each item with every other item in the scale, based

on Cronbach's alpha, denotes a coefficient of .96, which indicates strong scale reliability.

Procedure

The primary researcher filed an expedited application with the University of

Missouri Institutional Review Board and received permission to complete the study. In

addition the researcher attained permission from the Heartland AEA 11 Research

Committee. Two superintendents representing three school districts met with the

researcher to discuss the study and gain permission to seek volunteers from the various

schools that make up the school districts. Permission was granted via a signature on a

letter outlining the study and time parameters.

Data was collected via a paper and pencil questionnaire during two separate

phases of the study. The surveys were administered three months apart to ensure that

teachers had adequate time to begin implementation of RtI into their daily practices, as

these teachers were in the early stages of RtI implementation. During phase one of the

collection, the researcher presented the SoC questionnaire at the beginning of the teachers

first day of professional development for the school year. The standard recruitment

statement was read to three different groups of teachers (Appendix I) during the

professional development day. All teachers who had agreed to participate filled out the

paper and pencil questionnaire and returned it to the primary researcher that day during a

15-minute window set aside for data collection. Phase two of the data collection

occurred three months later during another professional development day. The same

procedures as described previously were utilized to administer and collect the paper and

pencil LRIUQ.

The researcher received a total of 128 responses for the SoCQ and 120 responses

for the LRIUQ. An attempt was made to seek the additional eight responses for the

LRIUQ at a later date; however, the eight participants were not available to respond to

the LRIUQ. Three of the participants had moved away, one was hospitalized for several

months, and four were unable to provide a response. Of the 240 questionnaires that were

received by the researcher, all were considered usable for the analyses completed with the

data. Responses were deemed usable if every question was answered and the

questionnaire had an ID code on it.

CHAPTER FOUR

Data Analysis and Results

As stated previously innovation implementation is influenced by teacher concerns regarding the innovation and that demographic factors influence teachers' stages of concern. Therefore, understanding how these factors relate to each other calls for a multifaceted approach beyond simple descriptive statistics. This chapter describes the research methods employed to explore the relationships among the following variables: level of RtI use, stages of concern, and categorical demographic status variables among teachers. It includes research hypotheses and data analysis strategies. Finally, this chapter summarizes and presents the questionnaire results from this study.

Data collection occurred between December 16th, 2009 and March 10, 2010. The questionnaire data was entered into the Statistical Package for the Social Sciences (SPSS) version 12 computer software used for quantitative statistical analyses. Prior to analysis, all variables were screened for possible code and statistical assumption violations as well as missing values and outliers using SPSS frequencies, explore, plot and regression procedures. All univariate outliers were detected or deleted if considered extreme or unusual. Pairwise linearity among the continuous variables was deemed satisfactory. To employ statistical applications that examine relationships among variables, the general rule of thumb is no less than 50 participants with the number increasing as the number of independent variables increase (Wilson, VanVoorhis, and Morgan, 2007). Tabachnick & Fidell (2001) offer the rule of 15 participants per predictor to determine an adequate sample size and Green (1991) suggests the formula $N > 50 + 8m$ (m=number of IVs) for testing multiple correlation and $N > 104 + m$ for testing individual predictors. Given the seven independent variables in the current study, the adequate sample size was

determined to be 105 (15 x 7 = 105) or 106 (50 + (8 x 7)), utilizing the respective

formulas. In the case of this research, 120 participants are sufficient for this type of

statistical analysis according to Tabachnick & Fidell (2001) and Green (1991).

To test the study research hypotheses, bivariate (correlational) and univariate

(regression) statistical methods were used as follows:

Research Question #1: Is teacher concern for RtI significantly predictive of level

of use of RtI? To test the model with the effect teacher concern has on RtI use, multiple

univariate regression analyses were run by entering the predictor variables one at a time

(SoC 0 through SoC 6 scores) and dependent variable (LoU total scores). In addition, the

Bonferroni correction was used to decrease the likelihood of Type I Error. It was

hypothesized that teacher concern would predict RtI use, in that higher stages of concern

would predict higher use scores.

Research Questions #2: Are particular demographic variables predictive of Stages of

Concern? To test the model of the effect demographic variables have on teachers' stages

of concern 0 through 6, multiple univariate regression analysis was run by entering the

predictor variables one at a time (gender, age, years of service, and level of degree) and

each dependent variable from the survey (Stages of Concern 0 through 6) one at a time.

In addition, the Bonferroni correction was used to decrease the likelihood of Type I Error.

It was hypothesized that gender, age, years of service, and level of degree would predict

stages of concern.

The hypotheses were analyzed via univariate regression analysis. Univariate

analysis provides a way to explore the relationship between one continuous dependent

variable and one independent variable. This analysis is based on correlation, but allows a

more sophisticated exploration of the interrelationship among a set of variables (Pallant, 2005). Standard univarite regression analysis was chosen to examine the data from this study as it explains how well a variable (Stages of Concern/Demographic characteristics) is able to predict an outcome (use of RtI/teacher concerns).

The major purpose of this study was to examine the predictive power of SoC on RtI use and of demographic variables on SoC. This chapter presents the results from the Stage of Concern questionnaire and the research findings from the tests of hypotheses of stages of concern and RtI use.

A series of descriptive statistics were conducted to examine the sample's stages of concern and level of RtI use. The sample mean score on the SoCQ was M = 132.29 (S.D. = 24.94) with scores ranging from 70 to 178. As for the LRIUQ, the results indicated that the sample had a mean score of 121.63 (S.D = 39.46) with scores ranging from 13 to 183. These means and standard deviations of the instruments are summarized in Table 3.

Table 3

Descriptive Statistics for Stages of Concern and Level of RtI Use Scales (N=120)

Variable	Mean	Standard Deviation	Minimum	Maximum	Total
Stages of Concern	132.29	24.940	70	178	120
Level of RtI Use	121.63	39.457	13	183	120

SoCQ Internal Consistency

For the current study a reliability analysis using SPSS, based on Cronbach's alpha, was completed for each of Hall et al., (1979) originally hypothesized stages of concern (see Table 4).   This analysis involved grouping statements by stage (Appendix B) as defined by Hall and colleagues (1998) and resulted in coefficients lower than those found in the original study and somewhat lower than the accepted standard for social

science research. Despite the lower coefficients calculated for this population, the

researcher chose to proceed with the use of the measure for this study as the number of

statements on a scale may affect the alpha coefficient.   According to Schmitt (1996),

alpha levels may appear lower with fewer scales items and this should be taken into

account when determining internal reliability of a measure. The size of the subscales on

this measure may have impacted the alpha as each sub scale is made up of only five

items.

Table 4

Coefficients of Internal Consistency for Stages of Concern Questionnaire (SoCQ)

Broadly Defined Stage	Un-Related	Self		Task	Impact		
Category	0 Unrelated	1 Self – Informatio nal	2 Self-Personal	3 Task-Manageme nt	4 Impact-Consequence	5 Impact-Collaboration	6 Impact-Refocusing
Alphas	.69	.69	.62	.59	.69	.75	.58

N=120

Stages of Concern Questionnaire (SoCQ) Analysis

The SoCQ was designed by Hall and Hord (1987; 2001) to create concerns

profiles and a peak stage of concern for respondents. Guidelines in the SoCQ technical

manual provide scoring and interpretation information (Hall et al., 1979; Hall & Hord,

2001). Interpretation of all stages of concern can occur upon defining the respondent's

peak stage of concern unless the peak stage is defined as Stage 0-awareness. Hall and

Hord (1987; 2001) propose that although Stage 0 is defined as an awareness stage, both

users and non-users of an innovation may be represented by Stage 0. This may occur due

to the difference in how users and non-users interpret the questions that make up this

stage. The non-user of the innovation would rate the statements highly because they have

little if any knowledge about the innovation. The advanced user, however, would rate the

statements highly as they do not have any concern about the statements.   The results of

the SoCQ are displayed in Table 5.

Table 5

Frequency and Percentage of Teachers at Six Stages of Concern on the Stages of Concern
Questionnaire (SoCQ)

Stage of Concern	Frequency	Percent
6—Refocusing	3	2.5
5–Collaboration	21	17.5
4—Consequence	30	25
3—Management	16	13.3
2—Personal	27	22.5
1—Informational	20	16.7
0—Awareness	3	2.5

The results of the SoCQ profile for individual respondents indicate that the

highest concerns were Stage 2, personal, and Stage 4, consequence. Individuals in the

personal stage are worried about their ability to meet the demands of using the innovation

and how the innovation might affect their personal role while those in the consequence

stage are considering the impact of the innovation on students' outcomes and

performance. In an attempt to further interpret the concerns data, the individual stages

have been grouped to represent the four broad stages of concern (unrelated, self, task, and

impact) defined by Hall and Hord (1987; 2001). As Figure 2 illustrates, of the 120

participants, 45% of the teachers are at the impact stage of concern, according to Hall and

Hord (1987) this suggests that they are at a higher level of use than the other teachers.

According to the Concerns Based Adoption Model, these teachers' concerns are focused

on how RtI impacts student outcomes and performance. Thirty nine percent of teachers

in the study are at the self-stage of concern; Hall and Hord's (1987) research suggests

that this is a more elementary level of RtI use. Teachers in this category have concerns

regarding how the innovation personally affects them.   Table 6 further describes the

sample characteristics including means and standard deviations for each stage of concern.

Figure 4. Percent of Teachers on Unrelated, Self, Task, and Impact Broad Stages on the Stages of Concern Questionnaire (SoCQ)
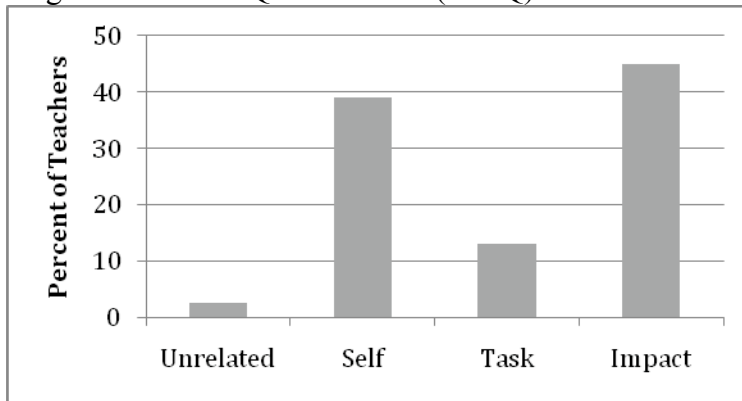
Table 6

Descriptive Statistics of Sample Characteristics

	N Sample Size	*SoC 0* Mean/SD	*SoC 1* Mean/SD	*SoC 2* Mean/SD	*SoC 3* Mean/SD	*SoC 4* Mean/SD	*SoC 5* Mean/SD	*SoC 6* Mean/SD
Age	120	13.22/6.753	18.62/7.355	21.14/6.580	19.18/6.360	21.42/6.064	20.43/6.129	17.52/5.758
Gender								
Male	38	16.50/6.777	21.03/5.385	21.76/6.445	20.16/5.616	21.45/5.113	19.26/5.736	17.55/5.880
Female	82	11.71/6.217	17.51/7.892	20.85/6.661	18.73/6.661	21.40/6.486	20.98/6.262	17.51/5.880
Degree								
BA/BS	90	13.23/7.114	18.48/7.084	20.59/6.646	19.19/6.217	21.10/5.963	20.08/6.178	17.13/5.851
BA/BS+	30	13.20/5.641	19.07/8.229	22.80/6.183	19.17/6.884	22.37/6.365	21.50/5.952	18.70/5.396
Years of Service								
Tenured	67	13.01/6.982	18.37/6.937	21.51/6.591	19.58/6.036	21.07/6.304	19.90/6.448	17.24/5.464
Non-tenured	53	13.49/6.509	18.94/7.909	20.68/6.601	18.68/6.773	21.85/5.776	21.11/5.686	17.89/6.145

Relationships between Concerns and RtI Use

As a first step to conducting the regression analysis the relationship between stage of concern (as measured by SoC 0 through SoC 6 scores) and level of RtI use (as measured by the total LoU score) was investigated using the Pearson product-moment correlation coefficient. Preliminary analyses were performed to ensure no violation of

the assumptions of normality, linearity, and homoscedasticity and no violations occurred.

The points of the normal probability plot lie in a reasonably straight line from bottom left

to top right and the scatterplot of the standardized residuals shows the residuals are

roughly rectangularly distributed, with most of the scores concentrated in the center.

There were no outliers with which to contend regarding this analysis. Normality was not

violated. The tolerance value (.956, .955, .501, .961, .50) for each independent variable

is not greater than 10; therefore, the multicollinerarity assumption was not violated. The

VIF value also supports this, as the value for each independent variable is well below the

cut off of 10 (1.046, 1. 047, 1.960, 1.04, 1.988). Correlations ranged from -.096 to .215

with the strongest for SoC1 and the weakest for SoC5. The correlations between the

variables are presented in Table 7.

Table 7

Pearson Product-Moment Correlations Between Measures of Stages of Concern and
Level of RtI Use (N=120)

Measures	SoC0	SoC1	SoC2	SoC3	SoC 4	SoC5	SoC6
(1) SoC 0							
(2) SoC 1	.443**						
(3) SoC 2	.330**	.433**					
(4) SoC 3	.316**	.302**	.349**				
(5) SoC 4	-.297**	.148	.033	.163			
(6) SoC 5	-.338**	-.121	-.077	-.149	.454**		
(7) SoC 6	-.109	.246**	.182*	.234*	.437**	.387**	
(8) LoU	-.354**	-.165	-.257**	-.096	.114	.215*	.189*

N=120. SoC 0 through SoC 6 = Scores on Stage of Concern subscales 0 – 6; LoU= Level of Use scale.
**p<.01, *p<.05

Significant relationships were found between several of the Stages of Concern

and also the Stages of Concern and Level of Use. Specific significant relationships found

between stages at the .01 level include: SoC 0 and SoC 1-5, SoC 1 and SoC 2, 3 and 6,

SoC 2 and SoC 3, SoC 4 and SoC 5 and 6, SoC 5 and SoC 6. SoC0, the lowest stage of

concern is positively correlated with other low stages of concern, (i.e., SoC 1, 2, 3) and

negatively correlated with the higher stages of concern (i.e., SoC 4, 5, 6). This makes sense because Stage 0 corresponds to the broad range of non-related concern, which is the lowest level of concern, and SoC 1, SoC 2, & SoC 3 fall within the broad ranges of self and task which are also early stages of concern according to Hall and Hord's theory (1987). Therefore, teachers scoring highest on the subscale that makes up Stage 0 would also be more likely to have higher scores on the subscales that make up the other broad ranges that represent earlier stages (SoC 1, 2, & 3). Consequently, these teachers would be more likely to have low scores on the subscales that make up the broad range of impact (SoC 4, 5, & 6) as these subscales indicate higher stages of concern which these teachers have not reached yet in their innovation adoption process.

SoC5, a higher stage of concern, is positively correlated with higher stages of concern (i.e., SoC 4 & 6) and negatively correlated with the lower stages of concern (SoC 0, 1, 2, & 3). This also supports Hall and Hord's theory regarding how SoC make up the broad ranges of concern (see Figure 2). Their research has shown that Stages 4, 5, and 6 make up the broad range of impact, which reflects the highest broad stage of concern. Therefore, if a teacher's score on the SoCQ is highest on the Stage 5 subscale it would be likely that s/he would also score high on the other subscales, Stage 4 and Stage 6, that make up the broad range of impact and subsequently have lower scores on all other subscales.

Two stages of concern were found to be significantly correlated with the level of implementation measure, LoU, at the .01 level. These include the lowest stage of concern SoC 0, which indicates individuals with unrelated concerns, and SoC 2, which indicates individuals with self concerns, which are also lower stages of concern.

Accordingly, the relationships between SoC 0 and 2 and LoU were negative in nature

indicating that teachers who score higher on the SoC 0 and 2 score lower on the LoU. In

other words, as teachers resolve concerns at one level (SoC 0, 2) their scores on that

subscale decrease, however, scores on the LoU would continue to increase as use of RtI

is occurring at a greater rate because of the resolution of the concerns at that level (SoC0,

2) and movement toward the next SoC. These findings in part support Hall and Hord's

(1987) theory in that lower stages of concern predict levels of implementation.

Two additional stages of concern were also found to be significantly correlated

with the level of implementation measure, LoU, at the .05 level. These include the two

highest stages of concern 5 and 6, which make up the broad range of impact concerns.

Accordingly, the relationships between SoC 5 and 6 and LoU were positive in nature

indicating that teachers who score higher on these stages of concern also have higher

levels of RtI use. These findings support the second part of Hall and Hord's (1987)

theory in that higher stages of concern predict higher stages of use.

Research question #1: Is teacher concern for RtI predictive of level of use of RtI?.

To address this research question, 7 separate standard univariate regressions were

conducted using each stage of concern (0-6) and the total score on the Level of RtI Use,

individually as a criterion variable. The regression model and related summary statistics

for the criterion variable and the independent variables are detailed in Tables 6 - 12.

Each SoCQ subscale score was regressed on the total score from the LRIUQ, providing

seven separate models. As suggested by Tabachnick and Fidell (2001) and Pallant (2005)

it is best practice to use a more strict alpha level to decrease the likelihood of a Type 1

Error. A common, simple and conservative method of adjusting the alpha, referred to as

a Bonferroni adjustment, is to divide the original alpha of .05 by the number of planned

comparisons. This research question has a total of 28 planned comparisons between the

demographic variables and the stages of concern. Therefore the new significance level

would be .05/28= .002. With the adjusted significance value the following relationships

were found to be significant. Stages of concern 0 ($F1$, $118 = 16.883$, $p < .000$) and 2 ($F2$,

$118 = 8.357$, $p < .005$) emerged as significant predictors of RtI use. Adjusted R squared

for SoC0 $= .118$ and for SoC2 $= .058$. Significant variables are shown in Table 8. Stages

of concern 1 and 3-6 did not emerge as significant predictors of RtI use (1: $p < .072$, 3: p

$< .295$, 4: $p < .215$, 5: $p < .018$, 6: $p < .039$). Variables are detailed in Tables 9-14.

As indicated in this model, stage of concern 0 ($\beta = -.354$, $p < .000$) and stage of

concern 2 ($\beta = -.257$, $p < .005$) were both significant predictors of RtI use. The findings

indicate that 6% and 12% of the variance in teachers' RtI scores can be explained in

terms of SoC0 and SoC2 scores respectively. This suggests that as teachers score high

for stages of concern 0 (unrelated concerns) and 2 (self concerns), both of which are early

stages of concern, they score low for RtI use. The results, however, do not support the

second part of the hypothesis that higher stages of use predict more advanced stages of

concern, with correlations of .096 to .354.

Table 8

Regression Coefficients for Level of Use and Stages of Concern 0 (N=120)

Variable	B	SE B	β
SoC0	-.061	.015	-.354*

*$p<.007$.

Table 9

Regression Coefficients for Level of Use and Stages of Concern 1 (N=120)			
Variable	B	SE B	β
SoC1	-.031	.017	-.165

Table 10

Regression Coefficients for Level of Use and Stages of Concern 2 (N=120)			
Variable	B	SE B	β
SoC2	-.043	.015	-.257*

*p<.007.

Table 11

Regression Coefficients for Level of Use and Stages of Concern 3 (N=120)			
Variable	B	SE B	β
SoC3	-.016	.015	-.096

Table 12

Regression Coefficients for Level of Use and Stages of Concern 4 (N=120)			
Variable	B	SE B	β
SoC4	-.018	.014	.114

Table 13

Regression Coefficients for Level of Use and Stages of Concern 5 (N=120)			
Variable	B	SE B	β
SoC5	-.033	.014	.215

Table 14

Regression Coefficients for Level of Use and Stages of Concern 6 (N=120)			
Variable	B	SE B	β
SoC6	-.028	.013	.189

According to Hall & Hord (1987 & 2001), a higher unrelated concerns score

using the SoCQ instrument indicates that there is little concern toward or involvement

with a particular innovation, in this case RtI. Therefore, these results support the

hypothesis that lower stages of concern predict lower stages of use. The results,

however, do not support the second part of the hypothesis that higher stages of use

predict more advanced stages of concern, with correlations of .096 to .354.

Demographic Characteristics and Stages of Concern

      Research question #2: Are particular demographic variables predictive of stages

of concerns?.

      To address this research question, 28 separate standard univariate regressions

were conducted using each demographic variable (teachers' age, years of service, level of

degree, and gender) individually as a predictor variable and each stage of concern (0-6),

derived from subscales present within the SoCQ, individually as a criterion variable.

Sample characteristics are displayed in Table 6 and descriptive statistics are provided.

Dummy coded variables were created for all categorical independent variables and were

used as predictors of stage of concern 0. The dummy variables were coded as follows:

years of service (not tenured, tenured), level of degree (bachelors, beyond bachelors), and

gender (female and male). A Bonferroni adjustment was also utilized on this research

question to decrease Type I Error. Under the guidelines for adjustment the original alpha

level of .05 was divided by the 7 planned comparisons providing a new significance level

of .007.   Under the adjusted alpha significance was found between the predictor variable,

gender, and SoC0, as can be seen in Table 15.

      Gender (male category) emerged as the only significant predictor of Stage 0 (F1,

118 = 14.570, p < .000). Adjusted R squared = .012. Significant variables are shown in

Table 15.

Table 15

Regression coefficients for SoC0 scores and gender

Variable	B	SE B	β
Gender	4.793	1.256	.332*

*p<.000.

The regression results with the predictors revealed that none of the demographic

variables were significant predictors of Stages 1 through 6. The regression variables are

shown in Table16. This study failed to support the hypotheses, that demographic

characteristics predict stages of concern one through six.

Table 16

Regression Variables for Demographic Characteristics and SoC 0-6

Variables	Age			Gender			Degree			Tenure		
	B	SE B	β	B	SE B	β	B	SE B	β	B	SE B	β
SoC0	-.033	.056	-.054	4.793	1.256	.332**	-.033	1.430	-.00	-.476	1.246	-.382
SoC1	.076	.060	.116	3.514	1.413	.223	.589	1.556	.035	-.570	1.357	-.039
SoC2	.004	.054	.007	.909	1.294	.065	2.211	1.378	.146	.828	1.212	.063
SoC3	.047	.052	.082	1.426	1.247	.015	-.022	1.347	-.002	.903	1.71	.071
SoC4	.025	.050	.047	.045	1.19	.003	1.267	1.278	.091	-.774	1.117	-.064
SoC5	-.057	.050	-.104	-1.172	1.197	-.131	1.422	1.291	.101	-1.218	1.126	-.099
SoC6	-.020	.047	-.038	.040	1.135	.003	1.567	1.211	.110	-.648	1.061	-.056

Note. ***p<.000.

The results suggest that when controlling for other variables in the model,

teachers who identified themselves as male on average were more likely to report

unrelated concerns reflective of SoC0. The regression results with the predictors

revealed that age, years of service and degree were not significant predictors of SoC0 and

that demographic variables in general were not significant predictors of SoC1-SoC6.

Several relationships have been explored and analyzed within this chapter. The

analysis appears to demonstrate that, in general, teachers concerns do influence RtI use

and that gender does influences teacher concern related to RtI adoption. In the following

chapter, these findings will be discussed in detail. In addition implications, limitations,

further research suggestions, and recommendations will be delineated.

CHAPTER FIVE

Discussion

The purpose of this dissertation study was to understand the innovation adoption

process of teachers by examining the relationships among the concepts depicted in Hall

and Hord's (1987; 2001) Concerns Based Adoption Model. In addition, specific

demographic characteristics of teachers and their influence on concern were explored.

The goal of this section is to discuss the study's findings and draw appropriate

implications and conclusions. The discussion focuses on how the concern and use

variables are interrelated as proposed in Hall and Hord's CBAM research framework.

Relationship between Stages of Concern and RtI Use

This study investigated how teacher concerns about RtI relate to their use of the

innovation. The results in part support the hypothesis about the effect of teachers'

concern on their use of RtI. Overall, teachers who reported lower stages of concern about

RtI were more likely to exhibit lower levels of RtI use. For example, teachers who

scored high on Stage 0 are in the "awareness stage" and have little or no concern

regarding the innovation because they have little or no involvement with the innovation

at this time. Teachers who scored high on Stage 1 are in the informational stage where

the focus is on learning more about the innovation. Teachers with high concerns in these

two stages scored low on the RtI use scale. These findings are consistent with the

prediction that teachers' who have low-level concerns, Stage 0 to Stage 3, are likely to

have low innovation implementation outcomes (Hall & Hord, 1987; 2001). However, the

second part of the hypothesis was not supported in that there were no significant

relationships between Stages 3 through 6 and level of RtI use. Therefore, Hall and

Hord's (1987; 2001) theory is supported only in part with this population.

Former studies investigating teacher concern and innovation use have occurred in

the educational setting, however, have mainly focused on computer and technology use.

No study to date has addressed teacher concern for use of the RtI innovation. A major

contribution of the current study is the emphasis put on concern and use of the RtI

innovation.

Relationship between Demographic Characteristics and Stages of Concern

The current study was in part conducted to gain a better understanding about what

demographic characteristics are predictive of teachers' concerns related to RtI. Overall,

the current study demonstrates that gender is predictive of concerns scores in that male

respondents had higher unrelated, Stage 0, and informational, Stage 1, concerns scores.

Previous change studies have found a relationship between demographic characteristics

(age, gender, years of experience, and level of degree) and concerns scores (Adams,

2002; Newhouse, 2001) despite Hall, George, and Rutherford's (1979) rejection of the

hypothesis. The current study in part supports these findings and indicates that gender is

predictive of early stages of concern related to RtI. However, no relationship was found

between demographic variables other than gender, which might suggest that further study

is necessary in this area. The gender differences found suggest that males have more

questions that need to be addressed before they can resolve concerns early on in the

adoption process. Males may not accept that the innovation is useful on face value alone;

they may require additional validation regarding the effects of the innovation prior to its

implementation. In addition, the sample contained a smaller percentage of males, which may have influenced the results.

Implications of Findings

Findings from this study improve our understanding of teacher concern related to adopting response to intervention as a decision-making framework. The findings indicate that teachers experience early stages of concerns, awareness and informational, as they begin the adoption process of RtI. In addition, they suggest that the teachers' stage of concern depends on their gender. Males are more likely to have concerns at stages 0 and 1, indicating early stages of RtI use. These findings have implications for professionals in practice, education, research, theory and policy.

According to Hall and Hord (1987; 2001), not all innovations are fully adopted into the actual daily classroom practice unless the implementation is monitored and appropriate interventions are provided. Therefore, personalizing the adoption process by identifying teachers concerns may be the key to successful innovation adoption. This study confirmed that a relationship exists between teacher concern and use of an innovation. Specifically, the earlier the teachers' stage of concern (Stages 0-2) the lower the perceived level of RtI use. This information may be used to assist administrators in developing intervention strategies to strengthen current practices and resolve early stages of concern toward RtI implementation, resulting in moving teachers toward later stages of concern (impact), thus increasing the levels of RtI use among teachers. It may also help administrators make appropriate decisions on when and how to provide support to individual teachers during the adoption of RtI.

Recognizing that a relationship exists between a teachers' gender and stage of

concern may also assist administrators in personalizing interventions to address concerns regarding RtI. The findings for this study revealed that males scored higher on self-concerns than females, which indicates that the male teachers in this sample have intense concerns about RtI and what it entails. Their need for information is centered around what the innovation is, what it will do, and what its use would involve (Hall, George, and Rutherford, 1979). Therefore, administrators may be able to more effectively assist male teachers in resolving these concerns by targeting males specifically with a variety of question and answer forums for both individual and small group participation. This type of intervention would assist these teachers in gaining the information they deem necessary to resolve their self concerns and move forward in the adoption process.

The teachers themselves may also benefit from understanding and examining how stages of concern relate to RtI adoption. Exposing teachers to this information may empower them to resolve their own concerns or perhaps be more open to intervention strategies designed to resolve their concern and allow them to move to a higher level of concern on their way to adopting the innovation, thus higher levels of RtI use within the system.

The findings from this study also contribute to the Concerns Based Adoption Model theory.   Hall and Hord (1987; 2001) posit that a change occurs developmentally over time beginning with concerns about self then shifting to concerns about task, and finally to concerns about impact. When the SoCQ was used in collecting data from teachers regarding the RtI innovation, the findings indicate that teachers' early in the change process experience unrelated and self concerns which supports Hall and Hord's (1987) conclusions and also contributes to the overall understanding of feelings and

perceptions about change related to RtI. It further extends the current research on the

Concerns-Based Adoption Model and the process of change by focusing attention on the

relationship between stages of concern regarding RtI and the use of the innovation as well

as individual characteristics of teachers in the RtI adoption process. In addition, the

findings from this study validate the use of the SoCQ as a reliable measure to collect data

about teachers' concerns related to RtI.

Limitations of the Present Study

Findings from the present study have provided preliminary insights into

understanding the relationship between teachers' concerns and RtI use, however, when

evaluating the research findings limitations must be considered. First, the study is limited

by the inherent limitations of short-term, cross sectional designs, which collect data on all

variables at one time. With this type of study, there is no indication of a sequence of

events, which prohibits causal inferences about the observed relationships among the

defined variables (Cone & Foster, 2005). In addition, the study illustrates only a

snapshot in time, and may provide differing results if another time frame had been

chosen. Participants' responses may have been influenced by some external events, such

as extra school activities, involvement in other projects, and examination periods.

Moreover, the results are only accurate to the degree that teachers' responses represented

true reflections of their present concerns and level of RtI use.

Second, the setting of the study and use of volunteers may also be problematic as

the participants are not entirely representative of the general population. The schools

from which the teacher participants were surveyed were all located in rural regions of the

mid-western United States, which could limit the ability to generalize the studies findings

to the larger population as these teachers may have considerably different concerns than teachers located in urban and suburban locations.

Third, the study was also limited in terms of the information regarding the reliability and validity of the LRIUQ measure. Scale development research is needed using exploratory and confirmatory factor analysis to further evaluate the scale. In addition, research is needed to replicate this study using these measures.

Fourth, there may have been learning or attitude changes that occurred during the three months between survey administrations that may have affected teacher responses on the LRIUQ.

Lastly, the LRIUQ is a self-report measure in which teachers report their perceived level of implementation. A direct of measure of implementation would have been a more robust data source.

Future Directions

While this study has been able to answer the research questions, the limitations of the research suggest that future research is necessary. A number of possible research studies remain to be explored. First, this study was a short term cross sectional design intended to gather questionnaire data at one point in time. Further study should focus on how the relationship between stages of concern and RtI use are affected by targeted interventions developed to address the specific stages of concern over time. Second, this study involved the use of the LORIUQ scale, which has not undergone rigorous reliability or validity evaluation. Therefore, development research is needed using exploratory and confirmatory factor analysis to further evaluate the scale. In addition, research is needed to replicate this study using the SoCQ and LRIUQ together. Third,

this study addressed the concerns and use of RtI for three school districts located in rural

areas of the Midwestern United States. Further research should focus on a larger

population of teachers faced with RtI adoption across the United States to include rural,

urban and suburban settings. Such a study would enhance the ability to generalize the

findings to the larger US population.

Conclusion

The overarching theoretical framework guiding this research emphasizes the

interrelationships between teachers' stages of concern and their level of RtI use. Previous

efforts to examine teacher concern and level of innovation use have focused primarily on

innovations related to technology. In an effort to extend this literature the relationship

between stages of concern related to RtI and the use of the same was assessed. The role

this innovation has on teacher concerns and RtI use was a contribution from this study.

The findings suggest that teachers in the early stages of the process of adopting RtI into

their practices have early stages of concern and low levels of RtI use.

The findings from this study suggest the need for further exploration of the

interrelationship between stages of concern and RtI use among teachers utilizing more

vigorous methodological approaches. Education professionals can use findings from this

study to recognize that teacher concerns significantly impact the use of RtI. The primary

goal should be to facilitate interventions with groups of teachers experiencing like stages

of concern to assist them in resolving the concerns being experienced at that stage and

empowering them to move to the subsequent stages, thus increasing the level in which

RtI is implemented. While this study provides some insights into the relationships

between teachers' concerns related to RtI and the use of the same, it has only begun to

explain the complex relationship between these variables.

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Appendix A

Concerns Questionnaire

Name_____

      The purpose of this questionnaire is to determine what people who are using or thinking about using various programs are concerned about at various times during the innovation adoption process. The items were developed from typical responses of school and college teachers who ranged from no knowledge at all about various programs to many years experience in using them. Therefore, <u>a good part of the items on this questionnaire may appear to be of little relevance or irrelevant to you at this time.</u> For the completely irrelevant items, please circle "0" on the scale. Other items will represent those concerns you <u>do</u> have, in varying degrees of intensity, and should be marked higher on the scale.

      For example:

This statement is very true of me at this time.	0 1 2 3 4 5 6 ⑦
This statement is somewhat true of me now.	0 1 2 3 ④ 5 6 7
This statement is not at all true of me at this time.	0 ① 2 3 4 5 6 7
This statement seems irrelevant to me.	⓪ 1 2 3 4 5 6 7

      Please respond to the items in terms of <u>your present concerns</u>, or how you feel about your involvement or potential involvement with **Response to Intervention.** We do not hold to any one definition of this program, so please think of it in terms of <u>your own perceptions</u> of what it involves. Remember to respond to each item in terms of <u>your present concerns</u> about your involvement or potential involvement with **Response to Intervention**.

Thank you for taking time to complete this task.

From: Gene, E. Hall, Archie, A. George and William L. Rutherford. <u>Measuring Stages of Concern about the Innovation: A Manual for Use of the SoC Questionnaire.</u> Austin, TX: Research and Development Center for Teacher Education, The University of Texas at Austin, 1977.

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Irrelevant   Not true of me now   Somewhat true of me now   Very true of me now

1. I am concerned about students' attitudes toward   0 1 2 3 4 5 6 7
    Response to Intervention.

2. I now know some other approaches that might work   0 1 2 3 4 5 6 7
    better.

3.   I don't know what Response to Intervention is.   0 1 2 3 4 5 6 7

4. I am concerned about not having enough time to organize   0 1 2 3 4 5 6 7
    myself each day.

5. I would like to help other faculty in their use of   0 1 2 3 4 5 6 7
    Response to Intervention.

6. I have a very limited knowledge about Response to   0 1 2 3 4 5 6 7
    Intervention.

7. I would like to know the effect of reorganization on my   0 1 2 3 4 5 6 7
    professional status.

8. I am concerned about conflict between my interests and my   0 1 2 3 4 5 6 7
    responsibilities.

9. I am concerned about revising my use of Response to   0 1 2 3 4 5 6 7
    Intervention.

10. I would like to develop working relationships with both our   0 1 2 3 4 5 6 7
    faculty and outside faulty using Response to Intervention.

11. I am concerned about how Response to Intervention affects   0 1 2 3 4 5 6 7
    students.

12. I am not concerned about Response to Intervention.   0 1 2 3 4 5 6 7

13. I would like to know who will make the decision in the   0 1 2 3 4 5 6 7
    new system.

14. I would like to discuss the possibility of using Response   0 1 2 3 4 5 6 7
    to Intervention.

15. I would like to know what resources are available if we   0 1 2 3 4 5 6 7
    decide to adopt Response to Intervention.

0	1	2	3	4	5	6	7
Irrelevant	Not true of me now		Somewhat true of me now		Very true of me now		

16. I am concerned about my inability to manage all that Response to Intervention requires.

0 1 2 3 4 5 6 7

17. I would like to know how my teaching or administration is supposed to change.

0 1 2 3 4 5 6 7

18. I would like to familiarize other departments or persons with the progress of Response to Intervention.

0 1 2 3 4 5 6 7

19. I am concerned about evaluating my impact on students.

0 1 2 3 4 5 6 7

20. I would like to revise Response to Intervention's instructional approach.

0 1 2 3 4 5 6 7

21. I am completely occupied with other things.

0 1 2 3 4 5 6 7

22. I would like to modify our use of Response to Intervention based on the experiences of our students.

0 1 2 3 4 5 6 7

23. Although I don't know about Response to Intervention, I am concerned about things in the area.

0 1 2 3 4 5 6 7

24. I would like to excite my students about their part in the approach.

0 1 2 3 4 5 6 7

25. I am concerned about time spent working with nonacademic problems related to Response to Intervention.

0 1 2 3 4 5 6 7

26. I would like to know what the use of Response to Intervention will require in the immediate future.

0 1 2 3 4 5 6 7

27. I would like to coordinate my effort with others to maximize Response to Intervention's effects.

0 1 2 3 4 5 6 7

28. I would like to have more information on time and energy commitments required by Response to Intervention.

0 1 2 3 4 5 6 7

29. I would like to know what other faculty are doing in this area.

0 1 2 3 4 5 6 7

30. At this time, I am not interested in learning about Response to Intervention.

0 1 2 3 4 5 6 7

0	1	2	3	4	5	6	7
Irrelevant	Not true of me now		Somewhat true of me now			Very true of me now	

31. I would like to determine how to supplement, enhance, or replace Response to Intervention.

0 1 2 3 4 5 6 7

32. I would like to use feedback from students to change the program.

0 1 2 3 4 5 6 7

33. I would like to know how my role will change when I am using Response to Intervention.

0 1 2 3 4 5 6 7

34. Coordination of tasks and people is taking too much of my time.

0 1 2 3 4 5 6 7

35. I would like to know why Response to Intervention is better than what we have now.

0 1 2 3 4 5 6 7

Appendix B

Statements on the SoCQ grouped by stage (adapted from Hall, G. E., George, A.A., and Rutherford, W. A. 1998, p. 25).

Item Number
       Statement

Stage 0 Awareness Concern

3	I don't even know what the innovation is.
12	I am not concerned about this innovation.
21	I am completely occupied with other things.
23	Although I don't know about this innovation, I am concerned about things in the area.
30	At this time, I am not interested in learning about this innovation.

Stage 1 Informational Concern

6	I have a very limited knowledge about the innovation.
14	I would like to discuss the possibility of using the innovation.
15	I would like to know what resources are available if we decide to adopt this innovation.
26	I would like to know what the use of the innovation will require in the immediate future.
35	I would like to know how this innovation is better than what we have now.

Stage 2 Personal Concern

7	I would like to know the effect of reorganization on my professional status.
13	I would like to know who will make the decisions in the new system.
17	I would like to know how my teaching or administration is supposed to change.
28	I would like to have more information on time and energy commitments required by this innovation.
33	I would like to know how my role will change when I am using the innovation.

Stage 3 Management Concern

4   I am concerned about not having enough time to organize myself each day.

8   I am concerned about conflict between my interests and my responsibilities.

16   I am concerned about my inability to manage all the innovation requires.

25   I am concerned about time spent working with nonacademic problems related to this innovation.

34   Coordination of tasks and people is taking too much of my time.

Stage 4 Consequence Concern

1   I am concerned about students' attitudes toward this innovation.

11   I am concerned about how the innovation affects students.

19   I am concerned about evaluating my impact on students.

24   I would like to excite my students about their part in this approach.

32   I would like to use feedback from students to change the program.

Stage 5 Collaboration Concern

5   I would like to help other faculty in their use of the innovation.

10   I would like to develop working relationships with both our faculty and outside faculty using this innovation.

18   I would like to familiarize other departments or persons with the progress of this new approach.

27   I would like to coordinate my effort with others to maximize the innovation's effects.

29   I would like to know what other faculty are doing in this area.

Stage 6 Refocusing Concern

2   I now know of some other approaches that might work better.

9   I am concerned about revising my use of the innovation.

20   I would like to revise the innovation's instructional approach.

22   I would like to modify our use of the innovation based on the experiences of
            our students.

31   I would like to determine how to supplement, enhance, or replace the
            innovation.

Appendix C
Level of RtI Use Questionnaire

The purpose of this questionnaire is to determine to what extent a person is using RtI in their practice. For the completely irrelevant items, please circle "0" on the scale. Other items will represent those concerns you do have, in varying degrees of intensity, and should be marked higher on the scale.

For example:

This statement is very true of me at this time.   0 1 2 3 4 5 6 ⑦

This statement is somewhat true of me now.   0 1 2 3 ④ 5 6 7

This statement is not at all true of me at this time.   0 ① 2 3 4 5 6 7

This statement seems irrelevant to me.   ⓪ 1 2 3 4 5 6 7

Please respond to the items in terms of your present use of RtI, we do not hold to any one definition of this program, so please think of it in terms of your own perceptions of what it involves. Remember to respond to each item in terms about your involvement with **Response to Intervention**.

Thank you for taking time to complete this task.

0	1 2	3 4 5	6 7
I am not familiar with and don't use this practice.	I've heard of this practice, but don't use it.	I am familiar with this practice but, don't use it regularly	I am familiar with this practice, and use it regularly
1. I use research-based reading curriculum in my classroom that emphasizes the five critical elements of reading.		0 1 2 3 4 5 6 7	
2. I deliver at least 90 minutes of reading instruction to all students in my classroom.		0 1 2 3 4 5 6 7	
3. I use the reading curriculum with fidelity (self-assessment protocol or other's observation).		0 1 2 3 4 5 6 7	
4. I regularly participate in consultation, coaching, or collaboration regarding my instruction.		0 1 2 3 4 5 6 7	
5. I collect progress monitoring data for identified students.		0 1 2 3 4 5 6 7	
6. I graph progress monitoring data to assist in interpretation.		0 1 2 3 4 5 6 7	
7. I review progress monitoring on a regular basis to make instructional decisions.		0 1 2 3 4 5 6 7	

0	1	2	3	4	5		6	7
I am not familiar with and don't use this practice.	**I've heard of this practice, but don't use it.**		**I am familiar with this practice but, don't use it regularly**				**I am familiar with this practice, and use it regularly**	

8. I use decision making rules adopted by my school when I analyze student data.	0 1 2 3 4 5 6 7
9. I share individual student data with families.	0 1 2 3 4 5 6 7
10. I collaborate with other teachers regarding data analysis and problem solving.	0 1 2 3 4 5 6 7
11. I participate in structured data conversations to inform instructional decisions.	0 1 2 3 4 5 6 7
12. My instruction is aligned with state standards.	0 1 2 3 4 5 6 7
13. I use evidence based intervention strategies to supplement core instruction when necessary.	0 1 2 3 4 5 6 7
14. I instruct supplemental reading groups.	0 1 2 3 4 5 6 7
15. I assist in the process to match curricular materials for each student's skill level.	0 1 2 3 4 5 6 7
16. I provide students multiple opportunities to respond during my instruction.	0 1 2 3 4 5 6 7
17. I participate in professional development that focuses on improving instructional methods in the core reading program.	0 1 2 3 4 5 6 7
18. I am involved in determining which students need to participate in a supplemental reading group.	0 1 2 3 4 5 6 7
19. I am involved in the decision making process to re-group students as needed.	0 1 2 3 4 5 6 7
20. I participate in continuing discussions about RtI procedures and the development of the model.	0 1 2 3 4 5 6 7
21. I use progress monitoring data to evaluate my instructional effectiveness.	0 1 2 3 4 5 6 7
22. I have an established data-management system that allows ready access to students' progress monitoring data.	0 1 2 3 4 5 6 7
23. I involve parents in the decision making process regarding their student.	0 1 2 3 4 5 6 7
24. I have participated in an analysis of the reading core curriculum.	0 1 2 3 4 5 6 7
25. I have defined reading goals for all of my students.	0 1 2 3 4 5 6 7
26. I use tiered levels of support to meet individual student needs.	0 1 2 3 4 5 6 7
27. I continually adjust group size, instructional time, and instructional programs to respond to student performance.	0 1 2 3 4 5 6 7

Appendix D

Demographic Questionnaire

Please complete the following information as it pertains to you.

Years of service
_____ Under 5 years
_____ 5-10 years
_____ 11-15 years
_____ 16 to 20 years
_____ more than 20 years

Highest degree held
_____ BS/BA
_____ M.Ed./MAEd./MSEd./Ed.M./MS/MA
_____ Ed.S.
_____ EdD

Age
_____ Under 25
_____ 25-36
_____ 37-48
_____ 49-64
_____ 65 +

Gender
_____Male
_____Female

Permission Letters from Superintendents

10/30/09
Steve Smith, Superintendent
Guthrie Center Community School District
Adair Casey Community School District

Dear Mr. Steve Smith,

I am a doctoral student at the University of Missouri. Under the supervision of Dr. Erica Lembke, I am conducting a research study to assess the impact a teacher's stage of concern has on implementation of Response to Intervention in the classroom, grade span, and school. I would like your permission to ask the teachers from your school to participate in my study. The research literature suggests that a teacher's stage of concern regarding innovation implementation is directly related to how much a teacher implements the innovation (e.g. the more concerned a teacher is about how an innovation impacts student outcomes the more likely s/he is to implement the innovation with integrity). Eventually, I hope to use the findings from my study to effectively differentiate how teachers are trained and how teachers are mentored through professional development. The University of Missouri's Institutional Review Board (IRB) as well as Heartland AEA11's research committee have approved my research proposal. I will treat all participants in a respectful and ethical manner.
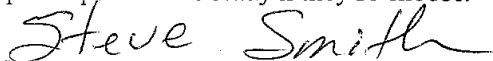
With your permission, I will ask teachers participating in professional development related to response to intervention (IDM) to complete two paper and pencil questionnaires, one that pertains to their concerns about Response to Intervention (IDM) and a second one that pertains to the level in which they use Response to Intervention (IDM). The first questionnaire will occur during the professional development session in December 2009 and a second questionnaire will be administered in February 2009. The completion of the questionnaires will involve two short activities on two separate occasions. Each questionnaire will take approximately 15 minutes to complete.

Any information obtained in connection with this study and that can be identified with individual teachers will remain confidential and will be disclosed only with teacher permission or as required by law. All participant data will be stored in a locked filing cabinet and the consent to participate will be kept separate from the questionnaire itself.

All participants may choose to participate in the study or not. If teachers volunteer to participate, they may withdraw at any time without penalty. Any teacher may also refuse to answer any question s/he does not want to answer and will still remain in the study.

If you have any questions or concerns about the research, please feel free to contact: Dorothy Landon, (515-745-9555, dlandon@aea11.k12.ia.us), Principal Investigator and Erica Lembke (573-882-0434, lembkee@missouri.edu), Faculty Sponsor. If you have other concerns or complaints, contact the Institutional Review Board at the University of Missouri, 483 McReynolds, University of Missouri, Columbia, MO 65211, (573) 882-9585.

I understand the procedures described above. My questions have been answered to my satisfaction, and I agree to allow teachers in my school district to volunteer to participate in this study if they so choose.

Steve Smith

Name of Superintendent   (Please Print)

Steve Smith

Signature of Superintendent   Date

10-19-2009
Kathy Elliott, Superintendent
Panorama Community School District
Panora, IA

Dear Ms. Kathy Elliott,

     I am a doctoral student at the University of Missouri. Under the supervision of Dr. Erica Lembke, I am conducting a research study to assess the impact a teacher's stage of concern has on implementation of Response to Intervention in the classroom, grade span, and school. I would like your permission to ask the teachers from your school to participate in my study. The research literature suggests that a teacher's stage of concern regarding innovation implementation is directly related to how much a teacher implements the innovation (e.g. the more concerned a teacher is about how an innovation impacts student outcomes the more likely s/he is to implement the innovation with integrity). Eventually, I hope to use the findings from my study to effectively differentiate how teachers are trained and how teachers are mentored through professional development. The University of Missouri's Institutional Review Board (IRB) as well as Heartland AEA11's research committee have approved my research proposal. I will treat all participants in a respectful and ethical manner.
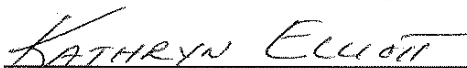
     With your permission, I will ask teachers participating in professional development related to response to intervention (IDM) to complete two paper and pencil questionnaires, one that pertains to their concerns about Response to Intervention (IDM) and a second one that pertains to the level in which they use Response to Intervention (IDM). The first questionnaire will occur during the professional development session in December 2009 and a second questionnaire will be administered in February 2009. The completion of the questionnaires will involve two short activities on two separate occasions. Each questionnaire will take approximately 15 minutes to complete.

     Any information obtained in connection with this study and that can be identified with individual teachers will remain confidential and will be disclosed only with teacher permission or as required by law. All participant data will be stored in a locked filing cabinet and the consent to participate will be kept separate from the questionnaire itself.
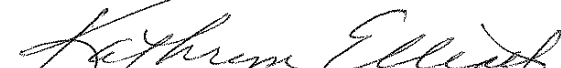
     All participants may choose to participate in the study or not. If teachers volunteer to participate, they may withdraw at any time without penalty. Any teacher may also refuse to answer any question s/he does not want to answer and will still remain in the study.

     If you have any questions or concerns about the research, please feel free to contact: Dorothy Landon, (515-745-9555, dlandon@aea11.k12.ia.us), Principal Investigator and Erica Lembke (573-882-0434, lembkee@missouri.edu), Faculty Sponsor. If you have other concerns or complaints, contact the Institutional Review Board at the University of Missouri, 483 McReynolds, University of Missouri, Columbia, MO 65211, (573) 882-9585.

     I understand the procedures described above. My questions have been answered to my satisfaction, and I agree to allow teachers in my school district to volunteer to participate in this study if they so choose.

_KATHRYN ELLIOTT_____
Name of Superintendent   (Please Print)

_Kathryn Elliott_____   _10-19-09_
Signature of Superintendent   Date

Appendix F

Campus Institutional Review Board
University of Missouri-Columbia

- 483 McReynolds Hall
- Columbia, MO 65211-1150
- PHONE: (573) 882-9585
- FAX: (573) 884-0663

IRB #	1131497
Project Title	The Impact Teacher's Personal Concerns Have on Response to Intervention Implementation
Approval Date	Dec 02, 2009
Expiration Date	Dec 02, 2010
Investigators	Landon, Dorothy J
Project Status	Approved Active Expedited

Dear Investigator:

This is to certify that your research proposal involving human subject participants has been approved by the Campus IRB. This approval is based upon the assurance that you will protect the rights and welfare of the research participants, employ approved methods of securing informed consent from these individuals, and not involve undue risk to the human subjects in light of potential benefits that can be derived from participation. Your IRB approval for this project will **expire on December 02, 2010**. You must submit the CRR report in accordance with Campus IRB policies, by the deadline of 45 days PRIOR to the expiration date.

Campus IRB Approval is CONTINGENT upon your agreement to:

(1) Adhere to all Campus IRB Policies.

(2) MODIFICATIONS: Submit an Amendment Application to the Campus IRB for any proposed changes to a previously approved project *prior* to initiation of those changes.   It is important to note that changes may not be initiated without prior IRB approval except where necessary to eliminate apparent and immediate dangers to the subjects. Should you need to initiate changes to eliminate immediate harm to a subject, please contact the Campus IRB immediately at (573) 882-9585. All proposed modifications will be reviewed upon complete submission of the Amendment Application located at http://irb.missouri.edu/eirb/.

(3) CONTINUING REVIEW: Federal regulations provide that a Continuing Review Report must be properly submitted by the deadline designated by the Campus IRB, as noted below in order to continue to conduct research activities. **If we do not receive your "complete" Continuing Review Report (45) FORTY-FIVE DAYS before the expiration date, the Campus IRB will not be able to guarantee that the CRR will be reviewed before expiration of approval.**

The Campus IRB does not extend approval deadlines. If the Campus IRB does not receive a Continuing Review Report by the deadline, your IRB approval will *automatically* EXPIRE on the expiration date and you will not be permitted to conduct research on that project until a new application is approved by the Campus IRB. *If you intend to close or withdraw your project, you will be required to submit a "Human Subject Research Activities Completion/Withdrawal Report".*

(4) RECORD INSPECTION: The Campus IRB reserves the right to inspect your records to ensure compliance with federal regulations at any point during your project period and three (3) years from the date of completion of your research. Researchers are required to manage and maintain a record keeping system that will maintain the confidentiality and reasonable organization of their research activities.

(5) RECORD KEEPING: You are expected to maintain copies of all pertinent information related to the study, included but not limited to, video and audio tapes, instruments, copies of written informed consent agreements, and any other supportive documents for a period of **three (3) years** from the date of completion of your research. You should not destroy any data or information without prior consultation with the IRB.

(6) UNANTICIPATED PROBLEMS OR ADVERSE EVENTS: You shall report any event or information to the Campus IRB that (1) related to the research activities; (2) was unforeseen; and (3) indicates that the research procedures caused harm to participants or others, or indicates that participants or others are at increased risk of harm .   Please review the policy entitled <u>Unanticipated Problems or Adverse Events Review Process</u> for more information, if you suspect an unanticipated problem or adverse event has occurred.   In addition, you must complete the eIRB "Unanticipated Problem or Event Report". This report can be accessed through the following website: http://irb.missouri.edu/eirb/.

(7) DEVIATIONS: IRB approval is contingent upon the investigator implementing the research activities as proposed. Campus IRB policies require an investigator to report any deviation from an approved project directly to the Campus IRB by the most expeditious means. All human subject research deviations must have prior IRB approval, except those implemented to protect the welfare and safety of human subject participants. If an investigator must deviate from the previously approved research activities, the principal investigator or team members must:
a. <u>Immediately</u> contact the Campus IRB at 882-9585.
b. <u>Assure</u> that the research project has provisions in place for the adequate protection of the rights and welfare of human subjects, and are in compliance with federal laws, University of Missouri-Columbia's FWA, and Campus IRB policies/procedures.
c. <u>Complete</u> the "Campus IRB Deviation Report" within 3 days. This may be accessed through the following website: http://irb.missouri.edu/eirb/.

(8) NONCOMPLIANCE: IRB approval is contingent upon the investigator implementing the research activities as proposed, in compliance with Campus IRB policies and procedures. Campus IRB policies require an investigator to report any noncompliant activities. If you have conducted research activities that did not receive prior IRB approval, or do not comply with Campus IRB decisions or directives, you must report the activities immediately. All human subject research activities must have prior IRB approval, except to protect the welfare and safety of human subject participants. If noncompliance occurs, you must:
a. <u>Immediately</u> contact the Campus IRB at 882-9585.
b. <u>Assure</u> that the research project has provisions in place for the adequate protection of the rights and welfare of human subjects, and are in compliance with federal laws, University of Missouri-Columbia's FWA, and Campus IRB policies/procedures.
c. <u>Complete</u> the "Campus IRB Compliance Breach Report" within 3 days. This may be accessed through the following website: http://irb.missouri.edu/eirb/.

Appendix G

Research Approval Letter

HEARTLAND
AREA EDUCATION AGENCY

6500 Corporate Drive, Johnston, IA 50131-1603 - 515 270 9030 - 800 362 2720 - fax 515 270 5383

October 14, 2009

Ms. Dorothy Landon
504 West Lane Court
Panora, IA 50216

Dear Ms. Landon:

Thank you for submitting your research proposal entitled "Teacher Readiness to Accept Response
to Intervention." The Heartland AEA 11 (Heartland) research committee and I have reviewed your
proposal. I am writing to inform you that that your project is approved for implementation in
Heartland AEA contingent upon the following:

- Approval for the study from the University of Missouri's IRB

Please submit the IRB approval to W. David Tilly, III, Ph D., Director of Innovation &
Accountability, Heartland AEA 11, 6500 Corporate Drive, Johnston, Iowa 50131. Upon receipt of
the above information, Dr. Tilly will re-examine your proposal for final approval. You have
permission to recruit schools/teachers within Heartland for participation

Alecia Rahn-Blakeslee, Ph.D., Program Assistant for Innovation, is your appointed liaison at
Heartland. She can be reached at 515/270-9030, ext. 14623 or arahn@aea11.k12.ia.us. Please check
with Dr. Rahn-Blakeslee when seeking assistance from Heartland staff or to gain access to student
records or agency-wide data. At the conclusion of your study, we would be most interested to
receive any written summary(ies) of your findings. If you are agreeable to this request, please send
these summaries to Dr. Rahn-Blakeslee.

Sincerely,

W. David Tilly, III, Ph D
Director, Innovation & Accountability
Heartland Area Education Agency 11

cc: Dave Stickrod, Region 2 Partnership Director
        Alecia Rahn-Blakeslee, Program Assistant for Innovation

*Extending
your reach.*

Appendix H

Consent to Participate in Research

Introduction

You are invited to participate in a research study conducted by Dorothy Landon, from Heartland AEA 11 and the University of Missouri. The results of this study will contribute to my dissertation. You were identified as a possible volunteer in the study because you have chosen to participate in professional development to establish a professional learning community around the principles and sustainability of implementing Response to Intervention.

Purpose of the Study

The study is designed to assess the impact your stage of concern has on the level in which you use Response to Intervention in your classroom, grade span, and school.

Procedures and Activities

1. You will be asked to complete two paper and pencil questionnaires that pertain to your concerns about Response to Intervention and the level in which you use Response to Intervention. The first questionnaire will occur now and a second questionnaire will be administered in December.
2. The completion of the questionnaire packet will involve to short activities on two separate occasions. Each questionnaire will take approximately 15 minutes to complete.

Potential Benefits

Although you as a participant will not benefit directly from this research, the information gained from the study will have implications on how teachers are trained and how teachers are mentored through professional development.

Confidentiality

Any information obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. All participant data will be stored in a locked filing cabinet and the consent to participate will be kept separate from the questionnaire itself.

Participation and Withdrawal

You can choose whether to participate in this study or not. If you volunteer to participate, you may withdraw at any time without penalty. You may also refuse to answer any question you do not want to answer and still remain in the study.

Identification of Investigators and Review Board

If you have any questions or concerns about the research, please feel free to contact: Dorothy Landon, (515-745-9555, dlandon@aea11.k12.ia.us), Principal Investigator and Erica Lembke (573-882-0434, lembkee@missouri.edu), Faculty Sponsor.   If you have other concerns or complaints, contact the Institutional Review Board at the University of Missouri, 483 McReynolds, University of Missouri, Columbia, MO 65211, (573) 882-9585.

<div align="center">Signature of Research Participant</div>

I understand the procedures described above. My questions have been answered to my satisfaction, and I agree to participate in this study. I have been provided a copy of this form.

_____
Name of Participant (Please Print)

_____   _____
Signature of Participant   Date

Appendix I

Recruitment Script

I am a doctoral student at the University of Missouri. Under the advisement of Dr. Erica Lembke, I am conducting a research study to assess the impact your stage of concern has on the level in which you use Response to Intervention in your classroom, grade span, and school. The research literature suggests that the stage of a teachers concern is directly related to how much a teacher implements an innovation (e.g. the more concerned a teacher is about how an innovation impacts student outcomes the more likely s/he is to implement the innovation with integrity). Eventually, we hope to use the findings to effectively differentiate how teachers are trained and how teachers are mentored through professional development. The University of Missouri's Institutional Review Board (IRB) as well as Heartland AEA11's research committee have approved my research proposal. I will treat all participants in a respectful and ethical manner.

Participating to fill out the questionnaire is entirely voluntary. You may choose whether to participate in this study or not. If you volunteer to participate, you may withdraw at any time without penalty. You may also refuse to answer any question you do not want to answer and still remain in the study. If you choose not to participate you may begin your break now.

You will be asked to complete two paper and pencil questionnaires that pertain to your concerns about Response to Intervention and the level in which you use Response to Intervention. The first questionnaire will occur now and a second questionnaire will be administered in December.
The completion of the questionnaire packet will involve two short activities on two separate occasions. Each questionnaire will take approximately 15 minutes to complete.

If you are willing to participate I would like each of you to read and sign a consent form. This is important so that you know your rights as a participant in the study. Please read this form, complete it and raise your hand when you have finished. I will walk around and distribute the research questionnaires to each of you. Once you receive the questionnaire, please begin completing them right away. When you are done with the entire set, please look up, and I will walk around and collect them.

After all completed questionnaires are gathered I will say, Thank you for participating in my study. Before I leave, do you have any questions about the study? I greatly appreciate your time and participation in my study. If you have any further questions please feel free to contact Dorothy Landon, (515-745-9555, dlandon@aea11.k12.ia.us), Principal Investigator and Erica Lembke (573-882-0434, lembkee@missouri.edu), Faculty Sponsor.   If you have other concerns or complaints, contact the Institutional Review Board at the University of Missouri, 483 McReynolds, University of Missouri, Columbia, MO 65211, (573) 882-9585.

VITA

Dorothy Landon earned a Bachelors Degree in Applied Psychology from Black

Hills State University in Spearfish, SD in 1994 and in 2000 earned a Masters Degree in

Social Work from the University of Missouri.   Dorothy began her practice of social work

in the Columbia Public School System while fulfilling the requirements to be a Licensed

Clinical Social Worker. Eventually she earned a Masters Degree in School Psychology

and a Ph D in School Psychology from the University of Missouri. In order to fulfill

requirements for the Ph D, she accepted an internship with Heartland Area Education

Agency (AEA) 11 in Iowa and upon completion of the internship continued her work as a

school psychologist with the AEA. Dorothy plans to further her work as a school

psychologist in order to impact change for teachers and students.