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Investigation of the American Recovery and Reinvestment Act of 2009: The Role of
Stimulus Funding on Development of a Three-Tiered Intervention

by

Laura Grayson

A Dissertation submitted to the Education Faculty of Lindenwood University

in partial fulfillment of the requirements for the

degree of

Doctor of Education

School of Education

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Stimulus Funding on Development of a Three-Tiered Intervention

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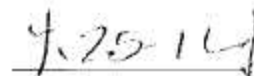
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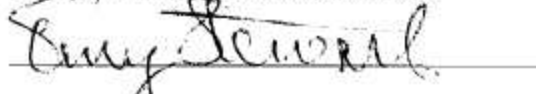
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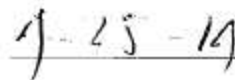
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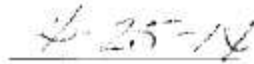
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Dr. Jill Hutcheson, Committee Member



Date

Declaration of Originality

I do hereby declare and attest to the fact that this is an original study based solely upon my own scholarly work here at Lindenwood University and that I have not submitted it for any other college or university course or degree here or elsewhere.

Full Legal Name: Laura Marie Grayson

Signature: Laura Grayson Date: 4-25-14

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Abstract

The purpose of this research study was to investigate how school districts, in the state of Missouri, dispersed funds from the American Recovery Reinvestment Act (ARRA) of 2009 to help drive educational reform, with respect to reading achievement and Response to Intervention strategies. The difference between the American Recovery and Reinvestment Act and other pieces of legislation aimed at educational accountability was that states were only given two years to spend the monies associated with this legislation. This quantitative research study examined 60 school districts in the state of Missouri to determine if there was a relationship between the stimulus funds provided for personnel, intervention support and professional development, and student achievement as measured by the MAP assessment. The researcher divided schools into strata of large and small districts based on enrollment of more than 3,000 students and fewer than 3,000 students respectively. Data collected included three ARRA budget codes (1100) for regular instruction, (2100) for non-instructional support, (2210) for professional development for the 2009-2010 and the 2010-2011 school years, as well as communication arts data from the MAP assessment. The literature review outlined legislation framed for educational accountability, changes in practice for students identified at-risk, and best practices in reading instruction. The researcher examined patterns in spending in non-instructional support and professional development to determine if school districts provided materials for intervention and professional development to support teachers in implementing the interventions. Using multiple

regression data analysis, the researcher did not find any significant relationship between ARRA stimulus funds and student achievement as measured by the MAP assessment. Data indicated that additional funding was not the answer to improved student achievement.

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Chapter One: Introduction

Reading instruction and proficiency were, at this writing, topics discussed at the local, state and federal level, and outlined as an expectation in the federal legislation No Child Left Behind (NCLB). As stated by Fountas and Pinnell (2001), if children are to become proficient readers, they must read everyday and engage with a wide variety of texts for multiple purposes. When students are not reading at grade level proficiency educators need to provide early intervention that will help to close that gap (Clay, 1991). Historically, when students underachieved in reading and were unable to process texts on grade level they were referred for special education. Often those students continued to struggle with reading, and research indicated that very little reading comprehension instruction occurred in the pull-out, special education setting (Hollenbeck, 2013). Reading instruction continued to be vital for all students as Clay (1998) indicated, “If we notice children taking different paths we can interact with their different journeys . . . and in a couple of years expect them to arrive at common outcomes” (p. 3).

As education shifts to meet the demands of Common Core State Standards and classrooms across the country grow in their diversity, this researcher believes educators need to make necessary pedagogical changes to meet the needs of individual learners. Many districts and schools have turned to Response to Intervention (RtI) as a strategy to allow them to meet the needs of students identified as “at-risk” (Gersten & Dimino, 2006, p. 101). “Response to intervention (RtI) is a multitiered framework designed for early, and if necessary, sustained intervention for students who are unsuccessful in the general education curriculum” (Jenkins, Hudson, & Johnson, 2007, p. 582). RtI assisted teachers in their attempts to address the needs of all students within their classrooms. “Within RTI, the

frontline of prevention is Tier I, or the general education classroom, where every student, regardless of ability, is to receive high-quality instruction” (Brozo, 2010, p. 147).

Legislation such as No Child Left Behind provided states and school districts a framework for reading standards and assessments to build accountability based on educational results (USDOE, 2004). It was up to the local institution to find ways to provide meaningful instruction to all students. “With a three-level system, any initiative sponsored at the federal level will need to be interpreted and implemented by the state and local levels to impact the education system” (Wong & Nicotera, 2007, p. 60). In this researcher’s experience, limited resources required school administrators to make critical decisions in terms of personnel, materials, and professional development. A well thought out and cohesive educational pathway from pre-kindergarten to high school could ensure that students receive college and career ready competencies preparing them for a global workplace. “It takes great effort, leadership, teamwork, and resources to turn a school or district in the direction of rich, rigorous, differentiated instruction” (Fountas & Pinnell, 2012, p. 271). The standards-based movement in education has direct ties to *A Nation at Risk* (USDOE, 1983), which highlighted a need for more rigorous standards and expectations for teachers and students in terms of content and practice (USDOE, 2008). The passage of the Outstanding Education Act in 1993, stated continually monitored and adjusted standards and expectations so students could receive the level of instruction that allowed them to become successful and productive citizens (MODESE, n.d.).

In the state of Missouri, accountability measures were annually reviewed within school districts for accreditation purposes. Annual Proficiency Targets were to be met to indicate enough students within nine pre-determined subgroups scoring proficient or

advanced on the state assessments (MODESE, 2011). Each year the Target for Proficiency increased as states worked toward the goal of 100% proficiency for students in the areas of Communication Arts, sometimes referred to as English Language Arts, and Mathematics, as outlined by the No Child Left Behind (NCLB) Legislation (USDOE, 2008). School districts adjusted and modified standards, curriculum, and pedagogy to meet the rigorous proficiency rates outlined in NCLB.

The National Governors Association (2011) worked to provide a single set of standards for English Language Arts and Mathematics, which guided states and local agencies in developing curriculum and expectations that prepared students for college and participation in a global workforce. In this researcher's experience, implementing changes in curriculum and pedagogy required districts to examine current materials and programs, and then to adjust as necessary. These changes often required significant financial commitment in terms of purchase of materials and delivery of professional development. Many school districts benefitted from stimulus funding provided in The American Recovery and Reinvestment Act of 2009, which was "likely the greatest single infusion of federal dollars into education" (Warner, 2009, p. 11). This funding came at a time of economic down turn and districts had to make choices between "the immediate urgency of saving jobs and applying the stimulus funds toward important school reform initiatives, needed improvement measures, or both" (Warner, 2009, p. 10).

Purpose of the Dissertation

The purpose of this research study was to investigate how school districts in the state of Missouri disbursed funds from the ARRA of 2009 to help drive educational reform. The research targeted the area of reading instruction, assessment, and intervention

at the elementary level. According to the U.S. Department of Education (2009), the guiding principles for use of ARRA funds included “to save and create jobs, ensure transparency and accountability, thoughtfully invest one-time funds, and advance effective reforms” (p. 3).

ARRA funds were dispersed to states in the form of formula grants, competitive grants, basic stabilization funds, and bonds (Schulte, 2009). This study further defined how school districts in the state of Missouri, spent stimulus ARRA funds in terms of state stabilization and funds allocated through Title I, Part A. Data collection included the amount of funds spent in each allowable category and analyzed to determine how much of the ARRA funds were used to support a three-tiered intervention model or increased access to intervention materials for at-risk students in the area of reading. Data was analyzed to determine if the funds spent had an impact on student achievement as measured by Missouri Assessment Program (MAP) test scores in the area of Communication Arts at the elementary level over the span of three school years (2009, 2010, and 2011).

Rationale

The researcher’s intent was to analyze the method(s) of stimulus funds disbursement in school districts in the state of Missouri to determine if there was a measurable change in student achievement during the academic years of 2009-2010 and 2010-2011. “For years, consensus had been building across the political spectrum that the nation’s schools, especially those in urban America, were in urgent need of fundamental change” (Smarick, 2010, p. 15). President Obama stated, “In a global economy where the most valuable skill you can sell is your knowledge, a good education is no longer just a pathway to opportunity—it is a pre-requisite” (USDOE, 2009, p. 2). The guiding principles

of the ARRA of 2009 included, “using these funds to improve schools, raise achievement, and drive reforms [to] produce better results for children and young people for the long term health of our nation” (USDOE, 2009, p. 3). Before the funds were distributed to individual school districts, governors had to sign assurance “statements promising that their states were taking action to improve teacher quality, develop better data systems, enhance standards and assessments, and address low-performing schools” (Smarick, 2010, p. 16). Within the guidelines of the law, states were required to use funds from the American Recovery Reinvestment Act to address any budget shortfalls through the funding formula, so states were not able to reallocate resources (Smarick, 2010). “So it was difficult to categorize what [was] the ‘best’ use of stimulus funds” (Warner, 2009, p. 10). Funds from the stimulus package provided to school districts were intended for educational reform efforts, yet most districts used the funds to temporarily protect jobs in a failing economy (McDonnell & Weatherford, 2011; Smarick, 2010; Warner, 2009). “The American Recovery and Reinvestment Act of 2009 (ARRA) provide[d] approximately \$100 billion for education” (USDOE, 2009, p. 1). This legislation provided an extraordinary amount of money for education and the president asked educational leaders to make sure these funds were used to provide students with technologically rich classrooms (Waters, 2010). “After enactment, the U.S. Department of Education published a series of guidance documents describing the multiple types of federal assistance available for states and school districts under ARRA . . . laying out expectations for the use of Recovery Act funds” (Naik, Yorkman, & Casserly, 2010, p. 4). Given the aforementioned promises, districts had to make prompt and efficient decisions on how to spend the funds. However, the very nature of stabilization presented difficulty, as educators in decision-

making roles had to balance the disbursement of funds and the implementation of new initiatives in classrooms (McDonnell & Weatherford, 2011).

In this researcher's opinion, legislation has been the guidepost by which states, school districts, and teachers gain knowledge about educational requirements, and plan effectively for classroom instruction. With the reauthorization of Individuals with Disabilities Education Act of 2004 (IDEA), RtI became the accepted strategy for reducing the number of referrals to special education and demanded more focus on research-based interventions for struggling students (Fuchs & Fuchs, 2006). Educators needed to focus instructional practice to meet the needs of all of the students in their classrooms, and effectively address the needs of students who were not academically performing at grade level. "If we want to capitalize on the promise of RtI, we must focus on prevention-instruction models, recognizing the complexity of literacy, its teaching and its learning, and centralizing the ongoing development of teacher expertise" (Johnston, 2011, p. 529). The No Child Left Behind Act of 2001 (NCLB) and the Individuals with Disabilities Education Act amendments of 2004 (IDEA) have created opportunities for all student needs to be met with improved instruction (Danielson, Doolittle, & Bradley, 2007). Academic leaders found it imperative that educators were provided opportunities for professional growth in meeting and advancing academic progress for all students. "The ARRA legislation ultimately reflected this strategy of using short-term relief to produce long-term benefits" (Mead, Vaishnav, Porter, Rotherman, & Bellwether, 2010, p. 5). ARRA funds were dispersed to school districts during the 2009-2010 school year and the 2010-2011 school year, which provided decision makers a short time frame to effectively utilize the funds. This study was conducted to determine if school districts were able to

make decisions for ARRA funds in a two-year timeframe and make progress toward educational reform.

It is this researcher's belief that this study closes the gap within the current literature by demonstrating that federal legislation and funding through the American Recovery Reinvestment Act, fell short in creating the needed systemic change in educational systems to increase reading achievement as measured by the MAP tests. Fullan, Hill, and Crevola (2006), concurred stating, "This is because in school education, there is no built-in mechanism that leads to ongoing improvement in classroom instruction (p. 42).

Methodology Overview

This research study was completed as a quantitative study as the researcher "want[ed] to establish generalizations that transcend the immediate situation or particular setting" (Fraenkel, Wallen, & Hyun, 2012, p. 11). The research study was conducted in the nature of correlational analysis. The researcher investigated "the relationships among two or more variables . . . without any attempt to influence them" (Fraenkel et al., 2012, p. 331).

School districts were given the opportunity to use funds from the American Recovery Reinvestment Act to improve services for students that were identified at-risk for not meeting grade level standards (USDOE, 2009). Response to Intervention is "a rigorous prevention system provide[d] for the early identification of learning and behavioral challenges and timely intervention for students who [were] at risk for long-term learning problems" (National Center on Response to Intervention, 2010, p. 4). When students are

not responding to core instruction in the general education classroom early intervention was provided to boost the student's skills through early intervention.

The Title I, Part A funds made available under the ARRA provide an unprecedented opportunity for educators to implement innovative strategies to improve education for academically at-risk students and to close the achievement gap in Title I schools while stimulating the economy. (USDOE, 2009, p. 8).

The researcher worked with the Budget Office at the Department of Elementary and Secondary Education (DESE), in Jefferson City, MO, to gather three specific budget line item amounts from the Final Expenditure Report (FER) of those districts identified in a random sample of Missouri school districts. Budget information from those FER reports was collected for the 2009-2010 and 2010-2011 school years. The budget line items included were instructional services, non-instruction support services, and regular instruction. Information from DESE's website was used to identify the MAP results for each school district in the sample for purposes of achievement analysis. The secondary data gathered allowed for data to be collected and analyzed in terms of disbursement of funds and impact on student achievement.

Research Questions

RQ 1. How have ARRA funds been used in the state of Missouri to fund improvement of instruction services, non-instruction support services and regular instruction to advance educational reform efforts?

RQ 2. How have ARRA funds been used in the state of Missouri to expand or support the three-tiered model of Response to Intervention with the intent to increase student achievement?

Hypotheses

Hypothesis # 1. There is a relationship between the percentage of ARRA funds spent on the general improvement of instruction services and the percentage of students entering a RtI model of intervention at Tier II or Tier III as defined by the state of Missouri.

Hypothesis # 2. There is a relationship between student achievement and the percentage of ARRA funds allocated to develop RtI models of intervention as evidenced by achievement measured by MAP assessment scores in Communication Arts.

Hypothesis # 3. There is a relationship between student achievement and the percentage of ARRA funds allocated to develop core instructional materials and practice as evidenced by achievement measured by MAP assessment scores in Communication Arts.

Limitations

The ARRA of 2009 included budget allocations in nine major categories including State Fiscal Stabilization Funds (SFSF), Title I, Part A, IDEA Grants, Technology, Vocational Rehabilitation, Independent Living Services Funds, McKinney-Vento Homeless Assistance Funds, Pell Grants, and Work Study (USDOE. 2010).

Data Limitation. The researcher analyzed data from part of the State Fiscal Stabilization Funds and from part of Title I, Part A, thus limiting the amount of data reviewed. Relationships examined in this quantitative study will not allow an indication of the contribution to achievement by the remaining categories of funding.

Assessment Limitation. The researcher only used MAP data from the area of English Language Arts and only from the elementary level. There are other potential assessments used by districts to allow evidence of influence of spending on reading

achievement. However, contribution from those items cannot be included since the only assessment the researcher could be sure was utilized by all districts in the random sample data pool was use of the MAP.

Geographic Location Limitation. All data is gathered from the state of Missouri. And, though randomly sampled, conclusions drawn through use of the data may not be able to be generalized to settings in other states. Each state within the nation devised its own assessment program and system for meeting Adequate Yearly Progress to satisfy NCLB requirements.

Data from past and current school districts in which the researcher was employed were excluded from the study. The original design of the study was planned as a mixed methods study including follow-up interviews with those involved in allocating funds from the American Recovery and Reinvestment Act. The researcher was involved in the decision making process for allocating ARRA funds in one school district and consulted with decision makers in another school district. The researcher used information from those districts to help develop the questions that would be asked in follow-up interviews and heard opinions from those involved in those decisions. The researcher believed it would be best if that information not be included in the study.

Definition of Terms

Adequate Yearly Progress (AYP). Measures of progress based on annual proficiency results of state assessments, attendance, and participation rates of students in subgroups as outlined in requirements in No Child Left Behind (MODESE, 2011).

American Recovery and Reinvestment Act of 2009 (ARRA). “The American Recovery and Reinvestment Act of 2009 (ARRA) (Public Law 111-5) provide[d] \$10

billion in new funding for programs under Title I, Part A of the Elementary and Secondary Education Act of 1965 (ESEA)” (USDOE, 2010, p. 1). For the purpose of this study, ARRA funds will also be stated as stimulus funds.

At-Risk Student. Is defined as “a comparison of a given student’s performance with established criteria to determine if that student is progressing below the expected rate” (Gersten & Dimino, 2006, p. 101).

Curriculum-Based Measure (CBM). “CBM is an approach for assessing the growth of students in basic skills” (Deno, 2003, p. 184).

Explicit Instruction. Explicit Instruction is defined as “explicit instruction involves the overt, teacher-directed instruction of strategies, including direct explanation, modeling, and guided practice in the application of strategies” (Manset-Williamson & Nelson, 2005, p. 61).

Fiscal Cliff. Fiscal Cliff is defined as “when a school district is unable to sustain activities or services after stimulus funds are no longer available” (USDOE, 2012, p. v).

Highly Qualified Teacher.

1. Has obtained full State certification as a teacher or passed the State teacher licensing examination and holds a license to teach in the State, and does not have certification or licensure requirements waived on an emergency, temporary, or provisional basis; 2. Holds a minimum of a bachelor’s degree; and 3. Has demonstrated subject-matter competency in each of the academic subjects in which the teacher teaches, in a manner determined by the State and in compliance with Section 9101(23) of ESEA. (MODESE, 2012, para. 1)

Problem-Solving Approach. “The problem-solving model refers to interventions that use an inductive approach. This means that no student characteristic (e.g., disability label) dictates a priori what intervention will work” (Carney & Stiefel, 2008, p. 62).

Progress Monitoring. Progress Monitoring is defined as “a formative assessment to determine if students are benefiting from instruction and whether those benefits are accruing at an adequate rate” (Mellard, McKnight, & Woods, 2009, p. 187). “Progress monitoring also generates diagnostic information that helps practitioners make classification and program placement decisions (e.g., moving a student from Tier I to Tier II)” (Fuchs & Fuchs, 2006, p. 94).

Research-Based Interventions. Research-Based Interventions is in reference “to those interventions that are derived from rigorous research and have demonstrated a record of success; there is reliable, trustworthy and valid evidence to suggest the program is effective” (MODESE, 2011, p. 2).

Response to Intervention (RtI). Response to Intervention is defined as “a framework that uses student performance data to determine if instruction is effective for most students and to identify students who need supplemental interventions to attain benchmarks” (Vanderheyden, 2011, p. 335). Furthermore, “RtI is a schoolwide process that integrates instruction, intervention and assessment” (Johnson & Smith, 2008, p. 46).

Standard Protocol Approach. “The standard protocol model requires the use of the same empirically validated treatment for all students with similar problems” (Carney & Stiefel, 2008, p. 62). Also, “In a standard-protocol approach, educators are trained in strategies to address a particular academic skill, such as reading” (Dunn, 2010, p. 24).

Tier I Core Instruction. “The first tier of the RtI model focuse[d] on general education classroom instruction” (Dunn, 2010, p. 29).

Tier II Intervention. Is defined as “interventions...delivered through small-group instruction using strategies that directly target a skill deficit” (Buffum, Mattos, & Weber, 2010, p. 15).

Tier III Intervention. Is defined as “instructional support, delivered one-to-one, in order to meet specific needs in addition to Tier I and Tier II instruction” (Stuart & Rinaldi, 2009, p. 53).

Title I, Part A. The U.S. Department of Education (2010) stated “funds made available under the ARRA provide an unprecedented opportunity for educators to implement innovative strategies to improve education for academically at-risk students and to close the achievement gap” (p.10).

Universal Screening. Universal Screening is defined as “the first step in any prevention approach is the principal means for targeting students who struggle to learn when provided a strong evidence-based general education (Tier I) and who require supplemental (Tier II) instruction” (Jenkins et al., 2007, p. 582).

Summary

Educators in the United States were at a crossroads as we grappled with mandated requirements of standards, assessment and funding at the federal and state levels, while assuring a viable curriculum for all students. “The breakthrough that we are seeking involves the education community as a whole establishing a system of expert data-driven instruction that will result in daily continuous improvement for all students in all classrooms” (Fullan et al., 2006, p. 2). Districts and schools must use the financial

contributions of the federal, state, and local entities to develop and support a strong educational system (Smarick, 2010). The demand for high academic standards and assessments can be traced back to the legislation generated by *A Nation at Risk* (Wong & Nicotera, 2007). Accountability measures requiring proficiency in student achievement as measured by yearly assessment originated with NCLB (Dee & Jacob, 2010). School districts in the state of Missouri have been required to meet increasingly rigorous expectations in Adequate Yearly Progress (AYP) to maintain accredited status (MODESE, 2011). However, we must also understand that “Education is not about putting in the outcomes; it is about knowing what inputs, in what contexts, give rise to the desired outcomes” (Clay, 1998, p. 257). In addition, administrators and teachers must be provided with up-to-date professional development to understand and effectively apply the research based instructional strategies in their classrooms (Danielson et al., 2007).

The list of terms and definitions, while not exhaustive, was provided to aid the reader in understanding the educational terminology presented throughout the research study. The literature review presented in the following section outlines the use of federal funding for educational reform. Legislation such as provided by *A Nation at Risk*, No Child Left Behind (NCLB), Individuals with Disabilities Education Act (IDEA), and American Recovery and Reinvestment Act (ARRA) will be discussed showing how expectations and the standards-based movement evolved leading to the infusion of ARRA funds to support educational reform. RtI will be outlined in the literature review and shown as a need in the educational realm to reduce the number of students being referred for special education identification. At the time of this study states were required to show annual progress of all students on state assessments focused on quality instruction in the

general education classrooms. Finally, the literature review highlights research current at the time of this writing, in terms of best practices in the area of reading instruction. The reading research presented provides the reader with understanding of effective classroom reading instruction to meet the needs of all students.

Chapter Two: The Literature Review

Introduction

Educators, at the time of this writing, faced increased demands in their instruction related to rigorous standards, mandated high stakes assessment, and increased amounts of differentiation to meet the needs of all students. Educators faced with all these demands have had to find balance in their learning and implementation of new initiatives. “The near term reaction tends to focus on raising test scores in standardized tests as a way to meet NCLB requirements. The longer term challenge, however, has to enhance the life of the students’ mind” (Wong & Nicotera, 2007, p. 11). The literature review will describe the application of funds from the federal stimulus package granted in the American Recovery and Investment Act (ARRA) of 2009, to strengthen the implementation of a three-tiered intervention model in the state of Missouri. These funds were to be disbursed to school districts through established funding programs such as IDEA which supported intervention for at-risk students via Response to Intervention (RtI) and Title I which provided funding for students below grade level in the area of reading (Smarick, 2010). The literature will also outline the RtI model; assessments used to identify struggling students, the implementation of interventions in the general education classroom as well as, best practices in the area of reading instruction. As instructional practices shifted from a traditional method of special education referrals for struggling students to an intervention approach within the general education classroom, teacher pedagogy changed. “RtI represents a paradigm shift in both form of instruction and educational decision making” (Sansosti & Noltemeyer, 2008, p. 58). An overview of federal legislation will be discussed to describe a paradigm shift in the service delivery model for struggling students. This

review of literature provides the reader with background knowledge regarding the IQ Discrepancy Model as a method of identification of specific learning disabilities as well as RtI as an alternative method for assessing and identifying struggling students. This information on RtI will provide background knowledge for the reader outlining the need for federal funding to support the efforts of early intervention for students at-risk.

In addition, the review will provide the reader with information on research based interventions for those students performing below grade level proficiency in reading in terms of what research provides for best practices in reading instruction. It is the researcher's belief that this study will close the gap in current literature by demonstrating that federal legislation and funding ARRA used specifically to support the school reform initiative RtI, fell short in creating the needed systemic change in educational systems to increase student achievement as measured by the MAP tests.

Current Legislation and Funding

Historically, the federal government took a minimal role in funding educational initiatives at the state and local level until it was time to reauthorize the Elementary and Secondary Education Act, in which the federal government took a role in funding programs for disadvantaged students (Congress of the United States, 1993). "The accountability reality also challenge[d] instructional practices" (Wong & Nicotera, 2007, p. 11) that raised the question of who is responsible for instituting these changes? In a world of advanced technologies and continued globalization, classroom communities must be established where educators are experts at data-driven instruction and continuous daily improvement for all students (Fullan et al., 2006). In the researcher's experience, legislation at the federal level can be interrupted differently at the state and local level.

First it must be determined what data-driven instruction is and how it will be carried out at the classroom level. “Accordingly, educational accountability requires that all attention and support within the education system be directed at improving instructional practices” (Wong & Nicotera, 2007, p. 26). Building administrators must be skilled at recognizing effective classroom practice as well as, guiding and supporting staff members to continual professional growth. “When a learner makes connections and learning takes place, it is because of focused teaching” (Fullan et al., 2006, p. 34).

ARRA legislation provided financial relief amidst an economic crisis, raised expectations for rigorous standards and allowed educators to approach interventions for at-risk students through a RtI approach (Jennings, 2012). The guiding principles of the American Recovery and Reinvestment Act of 2009 stated, “using these [ARRA] funds to improve schools, raise achievement, and drive reforms will produce better results for children and young people for the long term health of our nation” (USDOE, 2009, p. 3). ARRA funds provided school districts with temporary relief as “declining revenues resulted in budget reductions that forced some school districts to eliminate jobs and scale back services and activities” (USDOE, 2012, p. 3). Decisions about how ARRA funds should be allocated were overshadowed with the fact that districts had two fiscal years to plan and begin implementation of ARRA funds so final expenditure reports could be committed by September 30, 2011 (USDOE, 2012). As those plans were created districts paid close attention to the assurances signed by their governors that stated that ARRA funds would advance effective reforms (USDOE, 2009). District officials had to wrestle with the notion of maintaining the status quo and avoiding a fiscal cliff while developing the needed improvement measures (Smarick, 2010; Warner, 2009). Administrators in

Michigan, Georgia, California and Arizona used ARRA funds to protect jobs and programs that already were in place in their districts (Smarick, 2010). This left very little opportunity to use the funds to initiate new programming or professional development for teachers, which would create long-term systemic change or increased student achievement.

Historically, “wave after wave of reform initiatives constantly disrupt[ed] the surface life of schools but rarely penetrate[d] deeply into the classroom to bring about systemic improvements in instruction” (Fullan et al., 2006, p. 42).

Table 1.

US Department of Education Recovery Act: Missouri Funding

ARRA Funding Category	Allocated Amount
State Fiscal Stabilization Funds (SFSF)	\$947,279,411
Title I, Part A	\$146,140,449
IDEA Grants (Special Education)	\$242,432,295
Education Technology Grants	\$8,874,303
Vocational Rehabilitation Funds	\$11,375,265
Independent Living Services Fund	\$2,621,697
McKinney-Vento Homeless Assistance	\$1,054,392
Pell Grants	\$265,818,388
Work Study Funds	\$4,292,369

Note. Adapted from “Recovery Act Funding for Missouri,” U.S. Department of Education (2010). Retrieved from: <http://www2.ed.gov/policy/gen/leg/recovery/state-fact-sheets/index.html>.

The American Recovery and Reinvestment Act (AARA) provided funding in multiple categories, but for the purposes of this study, only two of the nine funding categories will be discussed (Table 1) including State Fiscal Stabilization Funds (SFSF) and Title I, Part A (USDOE, 2010).

The U.S. Department of Education's Office of Inspector General (2009) stated that in a study of 22 states more than half of the Title I Recovery Act funds dispersed were spent on personnel costs and the other half were used to expand existing programs or activities. In the researcher's experience, it appeared that ARRA funds were used to more fully fund programs that were already established and expecting better performance results. The Council of Great City Schools surveyed 65 cities and of the 40 cities that responded the report showed that State Fiscal Stabilization Funds (SFSF), IDEA and Title I "paid for 49,787 FTE jobs—or 7.9 percent of the entire workforce in these forty city school systems" (Naik et al., 2010, p. 9). This created a mixed message for many districts of saving jobs and pursuing innovations, but this was difficult as 75% of the districts that responded to the survey indicated flat or decreased funding allocations in 2009-2010 (Naik et al., 2010). In terms of funding that included state stabilization funds and state aid from 2008-2010 ten school districts or 25% had an increase in revenue while 16 school districts or 40% saw a decrease in funding, and fourteen school districts or 35% had no change in their funding (Naik et al., 2010).

Arne Duncan was quoted in a letter to governors in 2009 stating, "States are not required to demonstrate progress in order to get phase two of stabilization funds" (Smarick, 2010, p. 19). Effective implementation of stabilization funds may have been undercut as many school districts had dropped their funding to 2006 levels to be eligible for funds, and the stabilization funds provided needed to be used in non-education areas (Naik et al., 2010) leaving some to question whether it was possible to make the necessary changes in schools that reflected allowable expenditures of ARRA funds at the same time impacted the future programming at the local level. ARRA funds were dispersed for short-

term relief to produce long-term benefits (Mead et al. 2010). It did not appear that the recession ended because of the additional allotment of funds to schools through ARRA yet the performance expectations were still in place (Warner, 2009).

With the reauthorization of IDEA (2004), it “require[d] schools to institute preventative measures that attempt[ed] to reduce the number of students who experience[d] initial failure” (Brozo, 2010, p. 147). RtI provided teachers with a method of gathering data and using that data to plan instruction (Gersten & Dimino, 2006). “The vast majority of students classified as SLD (specific learning disability) [were] referred for problems in literacy” (Johnston, 2011, p. 515). Clay (1987), a pioneer in early reading intervention, contended that reading disabilities are manifested through inadequate classroom instruction rather than genetics a child was born possessing. Classroom teachers must have the understanding and training to teach reading to all the students in their general education setting. Fullan et al. (2006) concurred, “In an expert instructional system, the case specific data consists of information on the previous and current status of learners” (p. 47). The No Child Left Behind Act of 2001,

in conjunction with the Individuals With Disabilities Education Act amendments of 2004 (IDEA) have created incentives to improve how K-12 instruction [was] provided and to improve the achievement of all students, including those with disabilities. (Danielson et al., 2007, p. 632)

A Legislative Timeline Leading up to Response to Intervention

The era of educational accountability can be traced to the landmark reform, *A Nation at Risk*, which stated that many high school students were illiterate, standardized test scores were dropping and students had to struggle to be successful in higher education

and thus began the movement of standard-based reform (U.S. Department of Education, 2008; Wong & Nicotera, 2007). *A Nation at Risk* highlighted a group of students who entered kindergarten in 1988. It should be noted that only five of those students would continue through school and achieve a college degree by the year 2007 (U.S. Department of Education, 2008). The recommendations outlined in *A Nation at Risk* included attention to content requirements at the high school level, rigorous standards and expectations, time devoted to core content, and high standards for those entering the teaching field (Wong & Nicotera, 2007). While this report set the tone for educational accountability it, “neglected to propose a design for a system of accountability to ensure the recommendations were put in place” (Wong & Nicotera, 2007, p. 4) leaving every state university and school district to interrupt the recommendations outlined in *A Nation at Risk* in a unique way.

In 1988, the Hawkins-Stafford Elementary and Secondary Improvement Amendments to the Elementary and Secondary Education Act mandated coordinated efforts between Title I programs and regular school curriculum, but it did not require a national test so that student achievement could be monitored (Wong & Nicotera, 2007). The reauthorization of the Elementary and Secondary Education Act in 1994 demanded that rigorous content standards be developed as well as assessments that were aligned to the standards so that student progress could be measured (National Academy of Education, 2009). Each state had autonomy and created assessments to measure student progress. This reauthorization of the Elementary and Secondary Education Act gave districts access to additional resources to meet the needs of high-poverty, low-achieving students (Wong & Nicotera, 2007). “The increasing role in the education system has been accompanied by increases in federal funding” (Wong & Nicotera, 2007, p. 62). For example, Title I funding

was initially used for pull-out services of eligible students generally those of high poverty, and legislation changes allowed Title I funding to be used in school-wide initiatives (Wong & Nicotera, 2007).

“Today’s educators are held accountable for preparing all students to successfully meet more rigorous standards and performance outcomes and to insure that students are college and career ready by graduation” (MODESE, 2013, p. 2). Each state had assessments developed and administered to students, and the National Assessment of Educational Progress (NAEP) assessment was used to measure student progress at a national level over time. “NAEP results are based on representative samples of students at grades 4, 8, and 12 for the main assessments” (National Assessment of Educational Progress, n.d., para 4). Although there has been some increase in student achievement it has not been as extensive or dramatic as hoped and it cannot be directly tied back to the changes in legislation (Dee & Jacob, 2010; National Academy of Education, 2009) (see Figure 1). This graph indicated the reading scores of students at the elementary level taking the National Assessment of Educational Progress (NAEP) assessment in reading over the span of 40 years. The data indicated that small improvements were made in reading, and students in 2012 were reading better than students in 1971, however, the progress was not significant.

In this researcher’s experience, when a classroom teacher believed students were unable to grasp the concepts that were being taught in the general education setting, they collaborated with colleagues and discussed the educational, emotional, or social concerns they had for particular students and brainstormed ways the classroom teacher could intervene.

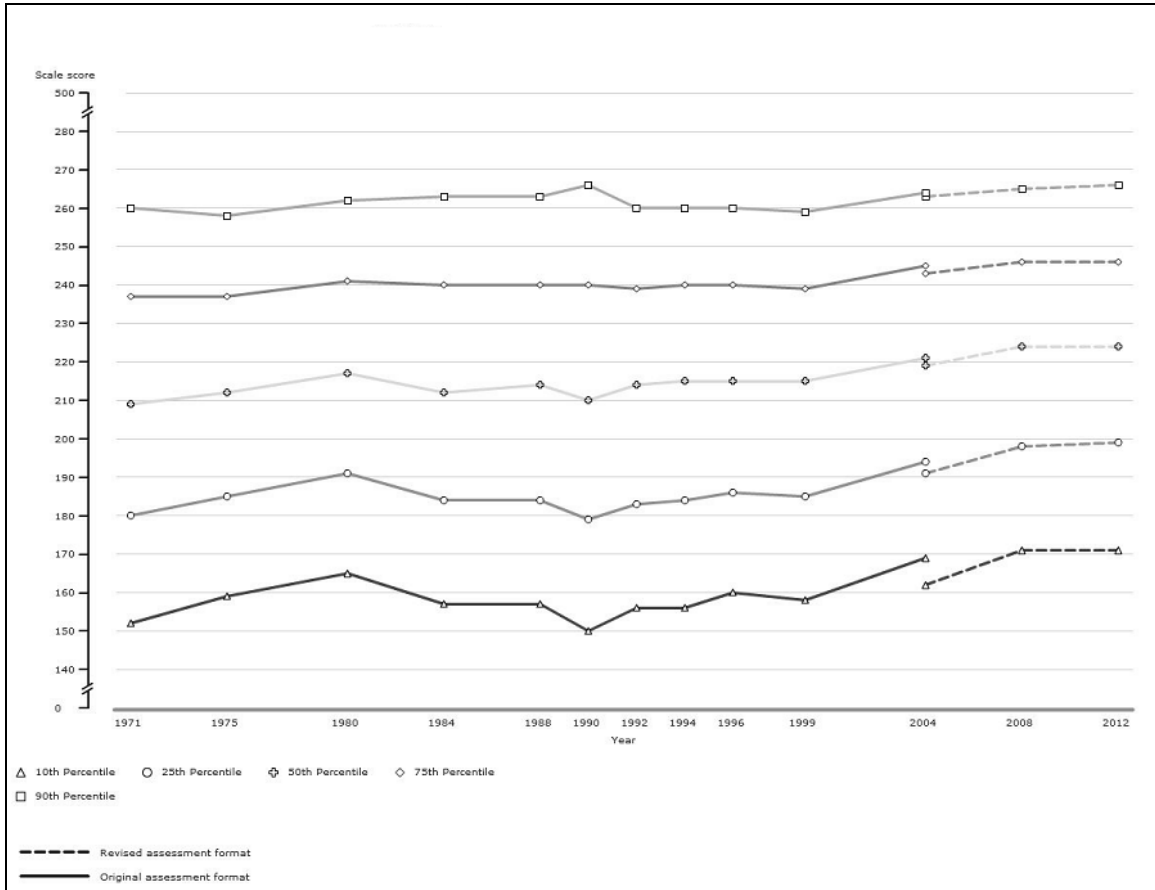


Figure 1. Average long term reading scale scores from the NAEP assessment, students age 9.

Source: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP). (1971; 1975; 1980; 1984; 1988; 1990; 1992; 1994; 1996; 1999; 2004; 2008; 2012).

*Significantly different, (p < .05) from 2012.

Original assessment format _____

Revised assessment format -----

“Student Study Teams typically made intervention recommendations on the basis of the classroom teacher’s description of the students’ academic or behavioral performance”

(Gersten & Dimino, 2006, p. 101). Formal and informal interventions occurred in many classrooms, if the student was not showing adequate progress, a referral for a special

education evaluation followed. “The act of teaching, re-teaching and working with

struggling students [was] not a new concept for classroom teachers” (Martinez & Young,

2011, p. 44).

RtI as an alternative method of identifying a student with a learning disability grew out of a study of the National Research Council (NRC) in 1982 (Martinez & Young, 2011). School psychologists reported that administering individual assessments for the purposes of identifying a student to be eligible for special education services was a major part of each day (Henley & Furlong, 2006). Many children were identified with a specific learning disability (SLD), and pulled from the general education classroom and received services from a special education teacher in a smaller teacher-to-student ratio setting (Johnston, 2011). The Advocacy Institute in 2002 reported, “In the 1990s, preceding the initiation of the law, there was a 34% increase in the number of schoolchildren classified as SLD” (Johnston, 2011, p. 514).

In 2002, the passage of No Child Left Behind (NCLB), called for highly qualified teachers in classrooms using evidence-based practices to meet the needs of all students (Sansosti & Noltemeyer, 2008, p. 55), and meet minimum targets in reading and math measured in terms of Adequate Yearly Progress (Wong & Nicotera, 2007). Teachers that focused only on math and reading and provided ‘test like’ opportunities in the classroom were not making the necessary changes to truly impact student achievement. “If we truly hope to attain the goal of ‘no child left behind’, we must focus on creating a substantially larger number of effective, expert teachers”(Allington, 2010, p. 29). Not only must it be assured that we have placed the most expert staff with our students, accountability needed to be established to guide the work of administrators, teachers and students. “NCLB dramatically expanded the law's scope by requiring that states introduce school-accountability systems that applied to all public schools and students in the state” (Dee &

Jacob, 2010, p. 54).

Those schools and districts that were not meeting targets established by Adequate Yearly Progress as noted on the school report card were given opportunity the following school year to make improvements (Wong & Nicotera, 2007). “One concern about NCLB and most other test-based school accountability policies was that they may cause schools to neglect subjects other than math and reading” (Dee & Jacob, 2010, p. 59). While the National Assessment of Educational Progress (NAEP) results showed some progress in math since the inception of NCLB, there has been little to no improvement in the area of reading (Dee & Jacob, 2010). “In most cases, NCLB has prompted schools to become more attentive to data for determining which practices are most effective for students” (Lembke, Garman, Deno, & Stecker, 2010, p. 362). This would allow teachers to use formative data, progressing monitoring, and differentiated instruction to meet the needs of students rather than proceed to a special education referral for those students that were not making academic progress (Lembke et al., 2010).

President Bush reauthorized the Individuals with Disabilities Education Improvement Act (IDEA) in 2004, and the process for special education identification was forever modified (Fuchs & Fuchs, 2006). The passage of this legislation allowed educators to use a traditional IQ Discrepancy model for special education identification or a RtI model to identify at-risk students (Restori, Gresham, & Cook, 2008, p. 67). Martinez and Young (2011) referred to the work of Berkeley, Bender, Peaster, and Saunders (2009) and found 37 states implementing some form of RtI. “NCLB and IDEA were intended as complementary and effective legislation that, when comprehensively implemented, would substantially augment the efforts made by schools to address the needs of the entire school

population” (as cited in Rinaldi, Averill, & Stuart, 2011, p. 43).

IQ Discrepancy Model for Special Education: Identification

The use of the Discrepancy Model to recommend and identify students with a specific learning disability has been a widely accepted method since its inception in 1977 (Restori et al., 2008). The initial percentage of students with a specific learning disability was in the range of 2% of the population, and by the year 2000 the percentage increased to 6% of the population (Fuchs & Fuchs, 2006). As the number of students identified with a specific learning disability increased, the yearly funding school districts allocated for special education also increased. According to Fuchs and Fuchs (2006) the dollar amounts dedicated to special education were in the billions. It must be determined if the amount of dollars being allocated to assist students in special education was impacting their learning in a positive manner. “IDEA and NCLB contribute[d] to the developing environment of uniting general and special education students by emphasizing accountability and improved academic achievement” (Green, 2008, p. 15). To understand how facilitated environments can be established among general and special education it important to understand how special education students are classified. This classification method began as a discrepancy between a student’s intellectual abilities and academic performance in the classroom and defined by Restori et al (2008) as:

- a) establishing a significant discrepancy between intellectual/cognitive ability and academic achievement;
- b) identifying the existence of a psychological/cognitive processing deficit;
- c) determining if the child’s educational needs can or cannot be met without special education and related services; and
- d) exclusionary considerations. (p. 68)

The researcher believes that no educator would disagree that struggling students need to be identified and have intervention(s) in place as early as possible. “However, few schools have systematic ways to screen all students experiencing reading difficulties including those with unidentified learning disabilities” (Henley & Furlong, 2006, p. 87). In addition, the discrepancy model made early identification difficult, as it was a “wait-to-fail” method where a student’s discrepancy between IQ and achievement may not appear until they are in the third or fourth grade (Restori et al., 2008, p.68). Waiting this long to determine that there are academic challenges made it difficult for students to make the necessary gains toward grade level proficiency (Johnston, 2011).

Restori et al. (2008) identified several factors highlighting challenges with the IQ Discrepancy Model, including young students who did not demonstrate enough of a discrepancy for a SLD qualification. There is little empirical evidence to support this model, criteria are often inconsistently applied, and those with lower intellectual ability do not qualify for services (Restori et al., 2008). In addition, “IQ testing was the province of school psychologists, and this expertise centralized them in the process of identifying SLD” (Johnston, 2011, p. 513). All of these factors led to the need for an alternative method for identifying students who truly require special education services. “Response to Intervention offer[ed] a new strategy for identifying and assisting struggling students without having to assign them to special needs services” (Demski, 2009, para. 1).

From IQ to RtI

Educators have used standardized assessments to determine if students have a discrepancy between their academic and cognitive abilities. When those assessments

revealed a discrepancy, in terms of standard deviation, the student was recommended or placed in special education services (Restori et al., 2008). “Addressing students’ learning challenges through research-based classroom instruction and practices and student-focused intervention programming helped reverse the trend of increasing numbers of students placed in special education” (Dunn, 2010, p. 22). Many RtI models are presented in the literature, but ones presented in the literature review focused predominantly on a three-tiered model of intervention. Bianco (2010), offered three basic components of a three-tiered RtI model including research-based interventions, progress monitoring to measure change, and educational decision-making based on student results. Bianco (2010) went on to say, “RtI is a system of educational redesign based upon a hierarchy of interventions” (p. 4). It is important to note that the research-based interventions can be implemented with students as early as kindergarten (Dunn, 2010). Martinez and Young (2011) stated, “The primary goal of RtI [was] to provide the interventions a struggling student would need to become successful in the general education curriculum” (p. 44). Restori et al. (2008) also concurred, describing the need to have interventions designed for individual students at the onset of academic problems.

Demski (2009) wrote that a three-tiered model of RtI was developed as a means to offer multiple levels of intervention support to address individual students’ academic needs. This model has been visually represented as a segmented triangle where Tier I, appears on the bottom part of the triangle, and is designed to address core instruction for 80% of the students in the general education setting (Demski, 2009). The state of Missouri (Figure 2) also subscribed to a three-tiered model for RtI (MODESE, 2013).

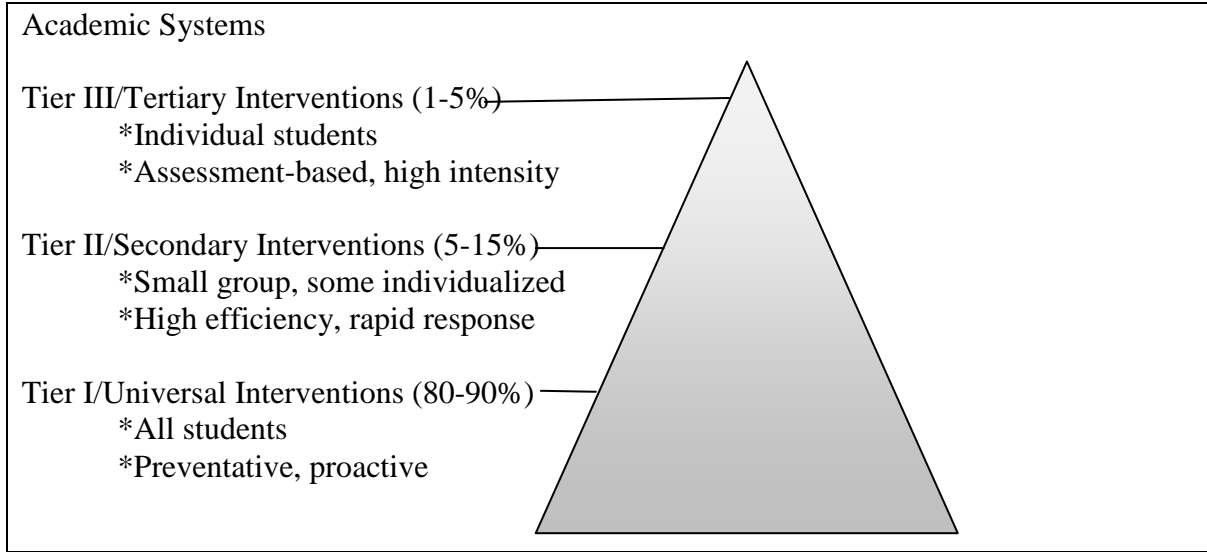


Figure 2. Missouri model for Response to Intervention.

Note. Adapted from “About Response to Intervention”, Department of Elementary and Secondary Education (2013), Retrieved from: <http://dese.mo.gov/3tieredmodels/rti/>.

In many school settings, all students are screened in Tier I with curriculum-based measures (CBM) to determine their levels of proficiency in areas of mathematics and reading, and these short probes allow educators to identify students who may have discrepancies in performance levels and require a higher level of intervention (Henley & Furlong, 2006). Demski (2009) described Tier II of the RtI model as, students who did not make adequate progress in the Tier I core instruction and are moved to “Tier II, where they receive small-group instruction, two or three times a week and frequent progress monitoring for a set duration, typically about nine to twelve weeks” (para. 5). Both Tier I instruction and Tier II intervention are characterized by the frequent collection of data used to determine if a student mastered the concepts presented; if the data collected during a Tier II intervention revealed that the student had not made progress toward the goal, then the student would be provided a Tier III intervention (Demski, 2009). “Typically, only 1 to 5 percent of students are escalated to Tier III” (Demski, 2009, para. 7). In the researcher’s experience Tier III supports are implemented within a special education setting.

Using this model, teachers would be able to identify struggling students in reading differentiated instruction would be provided, monitored progress and data collection would help a student progress toward a personal goal (Lembke et al., 2010). Allington (2010) identified six T's for classroom teachers to approach literacy instruction through the lens of RtI that included time, texts, teaching, talk, tasks and testing. First, students must be provided time to read. "Extensive time is critical to the development of reading proficiency" (Allington, 2010, p.31). Children need to be provided with a variety of texts scaffolded for complexity and introduced with explicit instruction from the teacher (Allington, 2010). Next, students talked to teachers and their peers about what they read through extended higher-leveled thinking tasks (Allington, 2010). Finally, teachers understood the reading processes of their students well enough that assessment marks were assigned based on effort and improvement rather than simply on discrete skills (Allington, 2010). While this practice was embedded under the umbrella of RtI, all students would benefitted from reading instruction in the general education classroom that allowed them to become independent consumers of a wide variety of texts.

Early Reading Intervention

Improved reading progress was a main tenet of the No Child Left Behind legislation (Wong & Nicotera, 2007). Intervention in reading instruction provided at an early age helped students strengthen their ability to read before literacy challenges are internalized (Bufalino, Wang, Gomez-Bellenge, & Zalud, 2010). Gersten and Dimino (2006) suggested several reasons early intervention in reading was not always advantageous including lack of identification of a reading deficit until the end of second or beginning of third grade, identification was often linked to special education, and no intervention occurred at the

classroom level. School districts needed to pay attention not only to the language of the legislation as a means of expectations for implementation and reporting, but also put into place the professional development necessary for teachers to access and implement the research based strategies for quality reading instruction (Danielson et al., 2007). Clay recognized the need to assist students with reading difficulties very early in the learning process (Dunn, 2010). Johnston (2011) argued that IQ tests, used exclusionary factors, to determine if a child qualified for services, however this information did not indicate whether a student would respond to intervention. In addition, those students receiving reading instruction outside of the general education classroom were now paired with a teacher that had less literacy training than the classroom teacher (Johnston, 2011). Prior to No Child Left Behind and the Individual with Disabilities Education Act, Reading Recovery (RR) began to help the most struggling first grade students in an intense one-on-one intervention for twenty weeks (Dunn, 2010). “An intervention programme especially tailored to the needs of each child...may be needed to supplement a classroom programme” (Clay, 1991, p. 324). Reading Recovery is an intervention model implemented with eligible first grade students who exhibit reading skill deficits (Clay, 1991). What Works Clearinghouse (WWC) found Reading Recovery to have positive effects in alphabetic principles and general reading achievement with additional positive results for fluency and comprehension (WWC, U.S. Department of Education, 2013).

RtI originated as an approach to intervention based on the individual needs of a student, and this method required that the individual implementing the intervention have training and expertise in both administration and assessment (Fuchs & Fuchs, 2006). RtI was designed as a general education initiative to facilitate teachers addressing student

needs in the classroom to avoid special education placement (Carney & Stiefel, 2008; Fuchs & Fuchs, 2006; Gersten & Dimino, 2006; Johnston, 2011; Lembke et al., 2010). “RTI’s [purpose was]: to provide struggling students with early, effective instruction and to provide a valid means of assessing learner needs” (Fuchs & Fuchs, 2006, p. 95).

Curriculum based measurements (CBM) monitor student progress on a monthly or bi-monthly basis (Henley & Furlong, 2006). A widely used CBM for assessing reading is oral reading fluency (ORF), which assesses students as they read as many words as they can from a given passage in a one-minute timeframe (Henley & Furlong, 2006). “Studies have repeatedly shown ORF to be a strong indicator not only of word recognition skill, but reading comprehension as well” (Henley & Furlong, 2006, p. 89). Highlighting the other side of the issue, Johnston (2011) stated, “By focusing solely on speed and accuracy and taking no account of the context of performance particularly the relative text difficulty, CBM can misdirect teachers’ instructional efforts” (p. 526). Clay (1991) reported that no reader would approach all texts without having some difficulty along the way, and the reader must develop a system of checks and balances to gain the meaning of the text. As teachers used general screenings to determine “at-risk” students, classroom instruction needed to be adjusted or modified to meet the needs of the individual students (Dunn, 2010). “The collaborative RTI model afforded participants a greater sense of autonomy and personal efficacy as educators, and a clear sense of shared leadership” (Rinaldi et al., 2011, p. 51). This means that school leaders and educators needed to examine current realities of practice in an effort to determine what has been successful and what needed adjustment. “To change our practices in an enduring way, we need to change our understandings” (Fountas & Pinnell, 2012, p. 271). Teachers often pushed students from

one reading level to the next in an effort to show progress, but the student had not commanded the “competencies that enable them to think within, beyond and about texts at each level” (Fountas & Pinnell, 2012, p. 273). A massive study was conducted to evaluate the use of Reading Recovery as a method for intervention for first grade students that were at-risk learners in the area of reading. This study included 15,000 teachers that entered data on the International Data Center’s website at Ohio State University for 115,000 students who received Reading Recovery as an early reading intervention during the 2004-2005 school year (Bufalino et al., 2010). The study indicated that more than 30,000 students were successful in Reading Recovery and were discontinued from the intervention program mid-year (Bufalino et al., 2010). “The results of this study illustrate[d] the power behind the expert scaffolding that occur[ed] in Reading Recovery lessons” (Bufalino et al., 2010, p. 13). For this type of intervention to be successful in the general education setting, classroom teachers needed the expertise of scaffolding the reading instruction for their students.

Assessment

Reading instruction is a complex set of skills and concepts that students must learn to integrate on a subconscious level so they become a proficient reader. “Reading is a complex, multifaceted process that begins and ends with meaning” (Fountas & Pinnell, 2001, p. 302). Screening and benchmark assessments give us a broad picture as to whether a particular student is likely to read at, above or below grade level (Gersten & Dimino, 2006). “Because RTI encourages appropriate use of evidence-based instruction across tiers, it should, in principle decrease the number of children incorrectly identified as disabled” (Fuchs & Fuchs, 2006, p. 96). Teachers must work to maintain a balanced classroom data

portfolio for students so that they have evidence of skills that students have not mastered. “Assessment elements, particularly screening and progress monitoring, are vital to an RTI model” (Mellard et al., 2009, p. 186). Educators use the data from screening assessments and progressing monitoring to adjust instruction or to place a student in a more intensive intervention to meet their needs (Duhon, Mesmer, Atkins, Greguson, & Olinger, 2009; Mellard et al., 2009; Ysseldyke, Burns, Scholin & Parker, 2010). There is a link between the assessment and the intervention and if the teacher cannot explain the assessment and how the information from the assessment will be used to inform instruction there is very little value to the assessment (Dorn & Henderson, 2010). “To achieve positive learning outcomes, instructionally relevant assessment needs to be precise, frequent, and sensitive to change” (Ysseldyke et al., 2010, p. 56).

Schools implementing a RtI model must be cognizant of how they will measure a student’s response to core instruction and non-responsiveness to instruction as well as definitive assessment measures for interventions that are implemented (Fuchs & Fuchs, 2006). “Addressing students’ learning challenges through research-based classroom instruction and practices and student-focused intervention programming helped reverse the trend of increasing numbers of students placed in special education” (Dunn, 2010, p. 22). A study of the long-term results of a RtI model revealed that teachers and districts were struggling to balance the needs of students responding to Tier II interventions but did not qualify for special education services, and there was a strong need for professional development to effectively implement a variety of interventions to meet the need of individual students (Carney & Stiefel, 2008). Concern about supporting the RtI movement led the U.S. Department of Education to fund a technical assistance center, the National

Center on RtI, involving the American Institutes for research and researchers from Vanderbilt University and the University of Kansas (USDOE, 2008). “The Center’s mission [was] to provide technical assistance to states and districts and build the capacity of states to assist districts in implementing proven models for RTI/EIS” (National Center on RTI, n.d.a, para.3).

Even though educators may know which students are below grade level proficiency in terms of reading, assessment data was necessary so that accurate interventions were implemented. One approach for data collection was to use a common screening tool for all students that had a benchmark level correlated to potential for results on state-wide assessments or graduation expectations (Fuchs & Fuchs, 2006). Reading curriculum-based measures (R-CBM) are used as a screening tool for all students because they are standardized for comparison of individual performance to that of the whole group such as a grade level (Deno, 2003). The National Center for Response to Intervention (n.d.b) progress monitoring provided data that showed the Reading Curriculum Based Measure (R-CBM) as convincing evidence for being sensitive to student improvement and correlated to end-of-the year benchmarks. Reading curriculum-based measures often over identified students needing additional reading assistance and didn’t always account for what reading skills should be assessed and at what grade level that should occur (WWC, U.S. Department of Education 2009). Teachers and districts must then wrestle with the wide variety of methods for teaching reading in the general education setting.

Best Practices for Reading Instruction

Educators have used the International Reading Association as a turnkey for researched practices in reading research. “The International Reading Association

support[ed] and encourage[ed] research that promote[d] informed decision making by reading professionals, policymakers, and the public” (International Reading Association, n.d., para. 1). The National Reading Panel (2000) also provided support for reading research and stated, “The analysis of reading and reading instruction involve[d] four interacting factors: students, tasks, materials and teachers” (p. 387). Using these guiding institutions and the Best Practices in Literacy Instruction_(2011) provided focus on the main tenets of reading research.

The general perspectives of reading best practice were targeted for the consumption of all students and necessary for success in reading within and beyond the classroom. Gambrell, Malloy, and Mazzoni (2011) stated that reading instruction should be evidence-based, further defined as “an instructional practice with a record of success that is both trustworthy and valid” (p. 17). The validity of the practice was evidenced by multiple forms of data that are collected and analyzed in terms of the practice and the student outcomes (Gambrell et al., 2011). Descriptions of evidence-based reading instruction must be interpreted by the educator through an understanding of evidence-based practice.

Some specific practices (Table 2) were widely accepted as evidence-based for comprehensive literacy instruction (Gambrell et al., 2011). Each one of the practices could be discussed in detail and were provided as a basis of understanding of reading practice. These reading practices on the five factors of instruction recommended by the National Reading Panel, addressed the rigorous common core standards, and rooted in the intervention approach of RtI. Recommendations were made to educators not to gravitate to one practice without finding a balance of instruction, or treating reading as a discrete set of skills and processes (Gambrell et al., 2011).

Table 2.

Ten Evidence-Based Best Practices for Comprehensive Literacy Instruction

1. Create a classroom culture that fosters literacy motivation
 2. Teach reading for authentic meaning-making purposes
 3. Provide students with scaffolded instruction in phonemic awareness, phonics, vocabulary, fluency, and comprehension to promote independent reading
 4. Give students time for self-selected independent reading
 5. Provide students with high-quality literature across a wide range of genres
 6. Use multiple texts that build on prior knowledge, link concepts, and expand vocabulary
 7. Build a whole-class context that emphasizes community and collaboration
 8. Balance teacher and student led discussions of texts
 9. Integrate technologies that link and expand concepts
 10. Differentiate instruction using a variety of instructionally relevant assessments
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Note. Reprinted from: Gambrell, L., Malloy, J., & Mazzone, S. (2011). Evidence-based best practices in Comprehensive literacy instruction. In L. Morrow & L. Gambrell (Eds.), *Best Practices in literacy instruction* (p. 21). New York: Guilford Press.

In the current research instructional reading balance was found framed from three sources of evidence. Madda, Griffo, Pearson, and Rapheal (2011) discussed in detail the balance between context and content (Figures 3 & 4). This evidence included achievement levels reflected from the National Assessment of Educational Progress (NAEP), broad ranged research in literacy that suggested skills, strategies and genres needed in literacy curriculum, and “balanced literacy” as a historical construct (Madda et al., 2011).

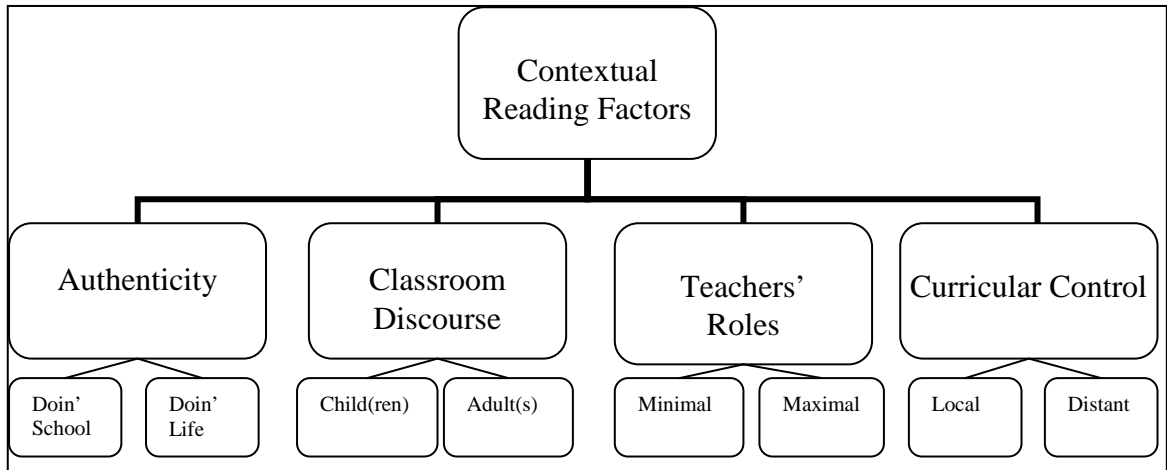


Figure 3. Balancing contextual reading factors.

Note: Adapted From: Mada, C., Griffo, V., Pearson, P. D., & Rapheal, T. (2011). Balance in comprehensive literacy instruction. In L. Morrow & L. Gambrell (Eds.), *Best Practices in literacy instruction* (p. 44). New York: Guilford Press.

All of these factors must be considered in planning daily reading lessons for all students in the classroom. Successful reading instruction was unsuccessful when following a script from a teacher's manual, rather teachers' deep understanding and knowledge of the aforementioned factors created truly differentiated instruction (Allington, 2010). The factor of curricular control appeared to be the most difficult for teachers' to control in that they must adhere to district mandates. "In short, when curricular control [was] too distant from the classroom, it [was] difficult for schools and teachers to adhere to their basic professional responsibility to adapt to individual differences" (Mada et al., 2011, p. 47).

In addition to the context of reading instruction, attention must be given to the content of the reading presented to students. With a greater emphasis placed on common core standards and increased ranges of text complexity for all students, balanced instruction became increasingly more urgent (Mada et al., 2011). In the researcher's experience as a curriculum leader, teachers have found the need for more instruction focused on expository text, the concepts presented within the text, driven through

discussion led by students.

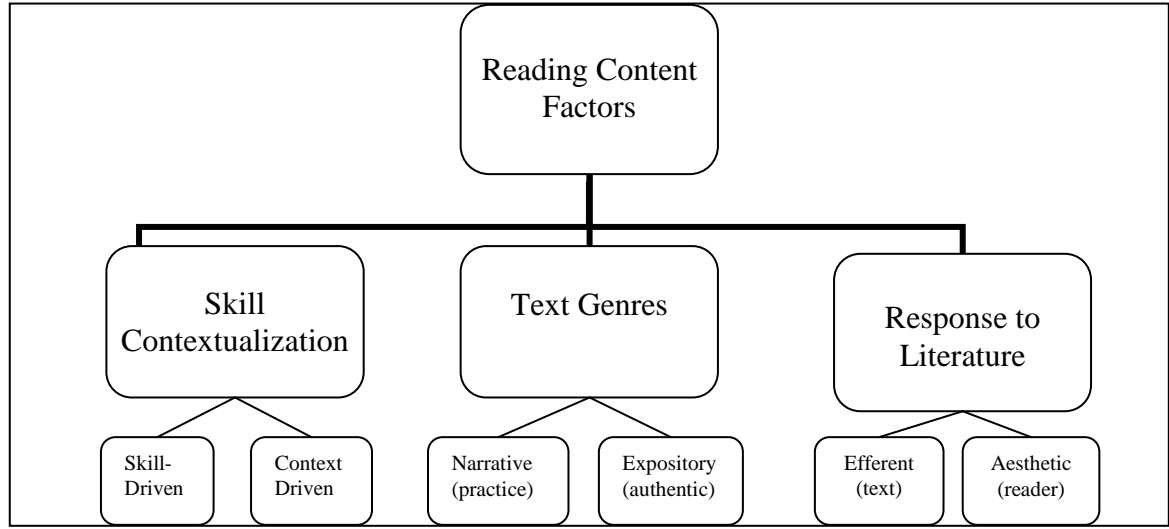


Figure 4. Balancing reading content factors.

Note: Adapted From: Madda, C., Griffo, V., Pearson, P. D., & Rapheal, T. (2011). Balance in comprehensive literacy instruction. In L. Morrow & L. Gambrell (Eds.), *Best Practices in literacy instruction* (p. 48). New York: Guilford Press.

Given the best circumstances and balanced instruction not all children acquired literacy competencies (Allington, 2011). These students required the quality instruction in their general education classroom, and additional direct instruction provided outside of the classroom. Districts have turned to the three-tiered RtI model to intervene with these struggling readers (Forbes, Swenson, Person, & Reed, 2010). “Title I and Reading Recovery were life preservers, keeping children from drowning while receiving services” (Forbes et al., 2010, p. 175). While frustrations existed around some Title I services because often paraprofessionals were often hired to work with the most struggling students in the area of reading (Allington, 2011). Reading Recovery trained teachers reached out to the lowest readers and provided specific, targeted one-on-one instruction in reading (Forbes et al., 2010). Whether the instruction was from a balanced approach in the general education classroom, small group support from a paraprofessional, or the intensive one-on-one intervention of Reading Recovery teacher knowledge and professional development

was paramount.

Professional Development

As educational research and instructional practice around best practices in reading instruction continued to evolve and change, educators turned to professional development opportunities to stay current. “Never before in the history of education has greater importance been attached to the professional development of educators” (Guskey, 2000, p. 3). As the RtI model gained momentum at the state and local level, it was imperative that school leaders and classroom teachers were trained in implementation of these practices. As educators turned to research for RtI they did not find specific professional development discussed in terms of the new model. Professional literature was limited in the area of professional development and RtI (Kratowill, Volpiansky, Clements, & Ball, 2007). Instead educational leaders turned to the research and professional development work of researchers that were already focused on early intervention. One such researcher, Clay, had developed training to focus on at-risk readers in an early intervention model, “before claiming that some ha[d] a learning disability we should rule out the possibility of inadequate instruction” (Johnston, 2010, p. 3).

“There is a growing body of research that shows correlations between aspects of formal teacher preparations and quality of teaching or student outcomes” (National Reading Panel, 2000, p. 387). Many researchers have noted the correlation of high quality instructors and increased student achievement (Darling-Hammond, 2000; Haycock, 2001; Marzano, 2003). Educators need to have the support to provide high quality instruction and intervention as clearly stated by Howard (2009) “differentiated professional development is a key part of this process. Long-term support revolves around practices, not packages, as

we learn to think more critically and reflectively about our instruction” (p. 53). It was critical that educators paid attention to the components of intervention in RtI, but also the characteristics of classroom instruction that would reduce the need of students who required additional intervention to be successful in reading (Scanlon, Gelzheiser, Vellutino, Schatschneider, & Sweeney, 2010). Scanlon et al. (2010) also stated “We reasoned that PD for classroom teachers, based on the intervention approach, could be equally or perhaps more effective in reducing the incidence of early reading difficulties” (p. 259).

“Research has shown that isolated training is insufficient. Educators need on-going support and training to maintain a high degree of implementation” (Kratowill et al., 2007, p. 627). It would be beneficial for teachers to be able to learn the skill through professional development and then have time to implement the new skill in their classrooms. Teachers need to be afforded opportunities to process the new information and adjust instruction based on their new learning. “Teaching and learning are reciprocal processes, and any change within a school begins with change within the teacher” (Dorn & Henderson, 2010, p. 92). Besides the many interventions that schools are putting in place to assist students in becoming better readers, educators need support in the implementation of these interventions through on-going professional development (Sansosti & Noltemeyer, 2008). These professional development trainings needed to be more than the teacher learning the component skills of the intervention, rather it “must result in changes in student outcomes” (Kratowill et al., 2007, p. 622).

Wong and Nicotera (2007) suggested that professional development has not been positive or productive because educators were simply going through the motions of sit and

get workshops rather than linked learning that impacted their instructional practice. When teachers were required to complete professional development hours through their school or district they did not always have choice on the trainings. Given numerous teacher constraints such as time and relevance of topic “they [were] seldom able to put into practice the new strategies covered in professional development when the practices [were] not part of the comprehensive improvement plan” (Wong & Nicotera, 2007, p. 177).

More than the ‘sit and get’ professional development workshop was needed for teachers to internalize and implement the discrete skills that were taught in the seminar. “Traditional professional-development strategies have not demonstrated that they are consistent, coherent, or relevant strategies that help bring about necessary changes in the processes of teaching and learning” (Wong & Nicotera, 2007, p. 177). Shifting from professional development seminars to learning integrated at the classroom level, DuFour (2011) and his work in Professional Learning Communities (PLC) led the way. PLCs “had been used by education researchers since the 1960’s to describe a more collaborative and collegial approach to teaching than the traditional isolated, closed-classroom-door model” (McLester, 2012, p. 65). DuFour (2011) claimed that organizations and their structures have not supported or encouraged colleagues to collaborate around instruction and practice. “There [was] abundant research linking higher levels of student achievement to educators who work[ed] in the collaborative culture of a professional learning community” (DuFour, 2011, p. 60).

Administrators and teachers were making a shift from the traditional professional development seminar to conversations steeped in professional learning communities, but a disconnect still existed. “The missing piece in most cases [was] a manageable system for

going from data to instruction” (Fullan et al., 2006, p. 20). How were teachers going to take all of this information so that it could be used to impact their instruction and ultimately the learning of the students in the classroom? “More and more, school districts [were] looking toward school-based coaching as a method to directly influence student learning” (Sweeney, 2007, p. 39).

Literacy coaching opened the potential for teachers to engage in conversations about data directly linked to the work in their classroom; coaching conversations seemed to provide the most authentic, job-embedded professional development (Hunt & Handsfield, 2013). “Many authors and current publications promote[d] the use of literacy coaches for professional development and reading reform” (Peterson, Taylor, Burnham, & Schock, 2009, p. 296). Implementation of the coaching framework found that teachers were reluctant to invite coaches into their classrooms, and coaches had to balance their role of colleague and trainer (Hunt & Handsfield, 2013; Peterson et al, 2009; Sweeney, 2007). Districts wanted to see instructional practice reflected in the success of students in and out of the classroom as well as on high stakes assessments, so a variety of professional development opportunities were available for teachers. “Reflection, collaboration, and conversations focused on instruction can empower us all to be even more effective in teaching our students to read” (Peterson et al., 2009, p. 311).

Summary

At the time of this writing, the ever-changing landscape of legislation was a key factor in evolving policies on educational accountability. Educators turned to the No Child Left Behind Legislation of 2001 for educational accountability expectations, but policy mandates and increased awareness of rigorous standards can be traced back to *A Nation at*

Risk (Wong & Nicotera, 2007). The challenge to educators was how to impact instruction and achievement given the changes in policy. This challenge was compounded by the number of students not making grade level progress. “Policymakers and the public often assume[d] that raising educational and performance standards would be sufficient for improving schools and student performance” (Wong & Nicotera, 2007, p. 14).

The IQ Discrepancy model, used for many years, had educational psychologists administering a large number of individual intelligence tests, and succeeded only in identifying a large percentage of students as having a specific learning disability (Henley & Furlong, 2006). The premise held that a student with a high IQ performed at a high academic level, and a student with a low IQ performed at a low level (Scanlon & Sweeney, 2010). However, it was demonstrated that was little to no relationship among students who had difficulty in reading acquisition and their measured IQs (Scanlon & Sweeney, 2010). The importance of early identification of students struggling in reading demonstrated the need for screening tools and diagnostic assessments to determine which students needed an intense intervention in the form of Reading Recovery or special education services (Dunn, 2010).

As use of the strategy RtI continued to expand in districts, the need for studies to assess the effectiveness of different approaches and models continued to be a prevalent discussion in the research literature. While current research provided a basis of understanding “the bottom line in RtI [has] optimiz[ed] instruction for particular students in particular contexts” (Johnston, 2010, p. 8). Additional research will be needed to determine the effectiveness of implementation of three-tiered intervention models under the umbrella of RtI.

Balance of context and content was needed for quality reading instruction in the general education classroom (Madda et al., 2011). When students were not successful with this interplay of skills and concepts in the classroom, additional reading support was required in the form of intervention provided by qualified individuals (Allington, 2011; Johnston, 2010; Scanlon & Sweeney, 2010). Reading instruction inside and outside of the classroom was monitored with informal and formal assessment to be assured that students were making progress, and if no progress was noted program changes were made (Scanlon & Sweeney, 2010).

Professional Development of teachers was critical in the woven fabric of policy, instruction, assessment and intervention for success in student achievement. “Over the past decade, it [had] become a given that any major reform initiative must be accompanied by investments in professional development” (Fullan et al., 2006, p. 22). As educational leaders strove to strike a balance between accountability and school improvement they needed to create a collaborative environment conducive for professional development (Wong & Nicotera, 2007). “Effective professional development activities [were] complex and dynamic interactions between educators, content knowledge, curriculum, instructional strategies, and student assessment” (Wong & Nicotrea, 2007, p. 179). The interactions among colleagues, reflection of instructional practice, and analysis of data were the critical components of professional development that allowed for continuous improvement and success (Peterson et al., 2010).

Chapter Three will describe the methodology of the study completed as an analysis of data from suburban school districts in the state of Missouri. This study provided the researcher with information as to how school districts in the state of Missouri dispersed

funds from the American Reinvestment and Recovery Act of 2009 to help drive educational reform or increased access to intervention materials for at-risk students in the area of reading. The researcher detailed how the study was designed and amendments needed to complete the study.

Chapter Three: Methodology

Introduction

Rigorous standards in education were traced to *A Nation at Risk* in 1983 when a presidential commission set forth recommendations for school improvement (Wong & Nicotera, 2007). This landmark piece of legislation began a series of policy changes focused on a standards-based movement in educational accountability. The reauthorization of the Elementary and Secondary Education Act of 1965 via the Hawkins-Stafford Amendments (1988) included funding for Title I curriculum (Wong & Nicotera, 2007). Next in line was the Improving America's Act (IASA) of 1994, which added adequate yearly progress for all students (Wong & Nicotera, 2007). The reauthorization of the Individual with Disabilities Act (IDEA) of 2004 brought the new assessment model of RtI to the forefront (Dunn, 2010). A more current piece of legislation that educational leaders frequently referred to, No Child Left Behind (NCLB) of 2001, provided for a continued close monitoring of accountability standards (Wong & Nicotera, 2007). "NCLB clearly signals the increase[ed] reliance on the theory of legal accountability for school improvement" (Wong & Nicotera, 2007, p. 9).

In an era of educational accountability and increased standards, educators paid particular attention to the growing numbers of students identified with specific learning disabilities, many of them in the area of literacy (Johnston, 2011). In a more traditional model students were caught in a wait-to-fail model, not having their delay in reading acquisition recognized until the end of third grade (Dunn, 2010). Clay (1991) realized that waiting for students to fail was not the best path. "An earlier offer of effective help to the child might [have] reduce[d] the magnitude of reading problems in later schooling" (p.13).

Intervention for students who were not making progress in the general education classroom was necessary. Clay recognized the need for this early intervention and created Reading Recovery in the 1970s to address the lowest readers in first grade (Dunn, 2010). Clay (1991) believed that intervention must be implemented very early as “the first two years of instruction may be critical for learning to read” (p. 313). RtI began a widely accepted strategy of identifying students who were not meeting grade level expectations (Scanlon & Sweeney, 2010) and provided a three-tiered model for assessment and intervention. Tier I was identified as classroom instruction for all students, and tiers II and III were created as additional support for students not responding to tier one instruction (Brozo, 2010). “One goal of RTI [was] to develop more valid procedures for assessing and identifying students who [were] at risk of reading failure” (Dorn & Henderson, 2010, p.133).

As RtI took center stage in districts and classrooms, more attention was placed on student assessment and intervention than on the instruction (Scanlon et al., 2010). Studies have documented the relationship between effective teaching and student achievement (Darling-Hammond, 2003 Haycock, 2001; Marzano, 2003; Scanlon et al., 2010). If RtI was to be successful in reducing the number of students who required additional support in reading instruction, teachers must be provided resources to help them become more effective practitioners in the classroom (Scanlon et al., 2010).

The purpose of this research study was to investigate how school districts, in the state of Missouri, dispersed funds from the ARRA of 2009 to help drive educational reform or increased access to intervention materials for at-risk students in the area of reading. According to the U.S. Department of Education (2009), the guiding principles for

use of ARRA funds included “spend quickly to save and create jobs, ensure transparency and accountability, thoughtfully invest one-time funds, and advance effective reforms” (p. 3).

The ARRA of 2009 was enacted as a means to strengthen education and improve student achievement from early learning to post-secondary education, as well as drive reform efforts (U.S. Department of Education, 2009). The state of Missouri received funding via this act, which was funneled into nine major budget categories including State Fiscal Stabilization Funds (SFSF), Title I, Part A, IEDA Grants, Educational Technology Grants, Vocational Rehabilitation Funds, Independent Living Services Fund, McKinney-Vento Homeless Assistance Funds, Pell Grants, and Work Study Grants (U.S. Department of Education, 2010). “The overall goals of ARRA [were] to stimulate the economy in the short term and invest in education and other essential public services to ensure the long-term economic health of our nation” (USDOE, 2009, p. 1). The researcher focused on allocations for small parts of SFSF and Title I, Part A. Examining expenditures in these budget categories allowed the researcher to determine if there was connection between funds allocated for non-instructional support and professional development. “Highly supported teacher professional development for learning new ways of teaching reading may be an especially critical factor for children’s reading progress” (Amendum & Fitzgerald, 2013, p. 469).

The state of Missouri received approximately \$900 million in SFSF to address the four following areas:

First, these funds were used to stabilize state and local government budgets in order to minimize and avoid reductions in education and other essential public services.

They helped ensure that local educational agencies (LEAs) and public institutions of higher education (IHEs) have the resources to avert cuts and retain educational personnel and staff. They also supported the modernization, renovation, and repair of school and college facilities. Finally, they advanced early learning through post-secondary education reforms to benefit students and families. (USDOE, 2010, para. 1)

Much of this funding allocation filled gaps that were created by the economic crisis (Mead et al., 2010). Although under the law of the act, states had to document how they would use SFSF to help drive educational reform (Mead et al., 2010).

The state of Missouri received approximately \$146 million in Title I, Part A to “improve teaching and learning for students most at risk of failing to meet state academic achievement standards” (USDOE, 2010, para. 2). Federal dollars tied to Title I grants initially started as pull-out services for targeted students, but evolved to serve at-risk students not meeting academic expectations, and federal dollars allocated for this grant increased every year since 1994 (Wong & Nicotera, 2007). School districts received Title I, Part A funds so that low income students not meeting standards for reading instruction were targeted for additional support and instruction (USDOE, n.d.a). With more students eligible for services than Title I funds available districts were faced with decisions about who would be served (Wong & Nicotera, 2007). The additional ARRA funds allowed school districts to serve more eligible students and enhance the quality of services provided using evidence-based strategies for instruction (USDOE, 2010).

Population

The researched population included a random sample of 60 schools districts across the state of Missouri. The state of Missouri was selected as the research site since this is where the researcher was familiar with educational practices at the state and district level. Initial contact was sent to superintendents and chief financial officers in the Missouri public school district system with the intention of collecting data from the Final Expenditure Report of fiscal year 2009-2010 and 2010-2011.

The researcher divided districts in the state according to student enrollment. Large districts with enrollment more than 3,000 students and small districts with enrollment fewer than 3,000 students were included in the population for the study. The researcher created a spreadsheet with all 522 school districts in the state of Missouri and their current enrollments. School districts were then categorized into large districts. A simple random sample was generated that consisted of thirty large and thirty small school districts. “The advantage of random sampling is that, if large enough, it is very likely to produce a representative sample” (Fraenkel et al., 2012, p. 95).

Developing the Methodology

The researcher began with a list of all the school districts in the state of Missouri. When current enrollment numbers were associated with each school district, the researcher divided the list into large and small school districts. The researcher conducted a random sample that included a total of 60 school districts who received funds from the ARRA, as noted on MODESE’s website (2010). Each of the school districts chosen was assigned a number to maintain anonymity in reporting results. The first strata included districts with a total student population of fewer than 3,000 students, and the second strata included

districts having a total student population of more than 3,000 students. These strata were determined after reviewing district information on MODESE's website (2007), showing more school districts with total student populations of fewer than 3,000 students. Within each stratum, data was divided by percentage of ARRA funds allocated to improvement of instruction services, non-instruction support services and regular instruction as coded in the Final Expenditure Report submitted to the state.

The researcher planned the study around budget allocations in two of the nine category codes of the ARRA of 2009 including state stabilization funds and Title I, Part A. Specifically, the researcher collected data from three budget line items including: ARRA Regular Instruction (budget code: 1100); ARRA Non-instructional Support Services (2100); and ARRA Improvement of Intervention Services (221). These budget amounts were analyzed against Missouri Assessment Program (MAP) scores in Communication Arts at the elementary level, for the 2009-2010 and the 2010-2011 school years to determine if a correlation existed between student achievement and the use of these additional funds.

Information from the budget records of ARRA expenditures were requested from specific school district(s) superintendents and the chief financial officers via email, throughout the state of Missouri. In the initial study design, a cover letter that introduced the researcher and described the nature of the study (Appendix A) was sent to the school districts. The cover letter served as consent to participate through submission of budget information and agreement to a follow-up phone interview. Follow-up interviews were to be conducted with the individual in the school district who oversees the spending for Federal Programs, as reported on the Final Expenditure Report. The interview questions

(Appendix B) were designed to assist the researcher to determine which products were purchased with ARRA funding. The researcher was not planning to conduct interviews to determine specific policies for making decisions about purchases, rather a list of products, services or programs that were purchased comprised the information sought.

After several failed attempts at data collection via email request, the researcher attempted to reach out to school districts through personal phone calls to superintendents and financial officers. Even though the researcher planned to keep all school district information anonymous, this attempt at data collection was also futile, as many school districts were wary about sharing budget information, as well as the follow-up interviews. It was clear to the researcher that gathering enough data to create an effective sample was not going to occur through the school districts.

The researcher prepared an amendment to the original study design, for submission to the Institutional Review Board (IRB), so that permission could be secured and data could be requested directly from the Missouri Department of Elementary and Secondary Education (MODESE), thus bypassing data collection from individual school districts. It was clear that this would also negate the original mixed methods study design, since no follow-up conversations would occur. When approval for the new study design was granted, the researcher made contact with the Budget Office at MODESE. The researcher provided the Budget Office with a cover letter requesting the necessary budget information for the selected school districts, as well as a copy of the approved IRB protocol from the university outlining the study design.

In an attempt to have a representative sample of school districts' financial information, the researcher worked with the Budget Office at MODESE to acquire

financial data for the 60 school districts in the representative sample. The Budget Office agreed to provide data from the three requested budget lines from the ARRA allocations for the 60 school districts identified in the researcher's stratified sample.

The researcher was able to gather additional information about the ARRA budget codes, but not the specific purchases made by any individual school district. The ARRA regular instruction (1100) was the budget code which targeted regular instruction as funds from this code were used to support personnel under the tenet of state stabilization or materials for classrooms (J. Jordan, personal communication, September 19, 2013). The budget codes for ARRA Non-instructional Support Services (2100), and ARRA Improvement of Intervention Services (2210) were managed under the Title I, Part A allocation of the budget and referred to additional curricular materials supports and professional development activities respectively (J. Jordan, personal communication, September 19, 2013).

With the budget data collected the researcher was able to collect assessment data from the Communication Arts MAP tests at the elementary level for the school years 2009-2010 and 2010-2011, for each school district. The researcher then accessed the percentage of students who scored at the proficient and advanced levels on this assessment from MODESE's website. The researcher created individual tables that indicated the percentage scores for students at grades three, four, and five for the aforementioned school years. These tables showed the threshold percentage determined by the state and how students at each grade level performed in relation to that threshold.

After all data had been collected, SPSS statistical analysis software was used to run multiple regressions of the data. "Regression is a statistical method used to describe the

nature of the relationship between variables” (Bluman, 2010, p. 530). First, descriptive statistics was created of the data to show the general trends of how the budget amounts were allocated in the three budget codes studied and how MAP data for the three grade levels was dispersed (Tables 3 & 4). Once the researcher had descriptive data collected, multiple regressions were run to account for outlier data and to control for enrollment.

Table 3.

Descriptive Data for ARRA Budget Codes FY 2009-10 and FY 2010-11

	Minimum	Maximum	Mean	Std. Deviation
FY 09-10 1100	\$0.00	\$8,025,103.00	\$1,635,223.37	\$1,834,343.61
FY 10-11 1100	\$0.00	\$2,718,784.00	\$580,215.31	\$690,441.66
FY 09-10 2100	\$0.00	\$4,763,958.00	\$113,386.62	\$620,551.31
FY 10-11 2100	\$0.00	\$567,043.00	\$32,127.33	\$96,914.18
FY 09-10 2210	\$0.00	\$930,202.58	\$69,062.03	\$172,807.14
FY 10-11 2210	\$0.00	\$1,334,540.17	\$57,052.33	\$181,100.77

Note. N = 60; 1100 = ARRA Regular Instruction; 2100 = ARRA Non-Instructional Support; 2210 = ARRA Professional Development.

More than 10 million dollars was allocated in budget code 1100 in the State Fiscal Stabilization Fund over the course of the two fiscal years to address necessary budget holes and to hire and maintain personnel. This amount exceeds the 5.2 million dollars allocated in budget code 2100 for non-instructional support materials and the 2.2 million dollars allocated in budget code 2210 earmarked for professional development. This table indicated that professional development services received the least amount of funding support from ARRA while personnel received the greatest amount of funding. This data supported the research as much of the “funding was being used to protect jobs and programs” (Smarick, 2010, p. 16).

Table 4.

Descriptive Data for MAP Scores Grades 3-5, School Year 2010-2011

	Minimum	Maximum	Mean	Std. Deviation
2010 Prf/Adv Gr. 3	20.0000	76.5000	44.958333	12.0527554
2010 Prf/Adv Gr. 4	20.0000	85.7000	53.180000	11.9529133
2010 Prf/Adv Gr. 5	30.3000	75.0000	51.946667	9.7101636
2011 Prf/Adv Gr. 3	.0000	46.2000	50.493333	55.5886187
2011 Prf/Adv Gr.4	25.0000	100.0000	55.085000	10.6893869
2011 Prf/Adv Gr. 5	25.0000	75.0000	51.615000	9.7811618

Note. n = 60

The data for the MAP scores revealed that students in grades three and four slightly increased the mean score for students scoring at the proficient and advanced levels from the 2010-2011 school year. Students in grade five had a very slight decrease in mean score of students scoring at the proficient and advanced levels from the 2010 school year to the 2011 school year. This data table indicated to the researcher that the number of students scoring in the proficient and advanced range remained flat during the two school years indicated.

Research Questions

RQ 1. How have ARRA funds been used in the state of Missouri to fund improvement of instruction services, non-instruction support services and regular instruction to advance educational reform efforts?

RQ 2. How have ARRA funds been used in the state of Missouri to expand or support the three-tiered model of RtI with the intent to increase student achievement?

Null Hypotheses

Null Hypothesis # 1. There is no relationship between the percentage of ARRA funds spent on general improvement of instruction and the percentage of students entering a RtI model of intervention at Tier II or Tier III as defined by the state of Missouri.

Null Hypothesis # 2. There is no relationship between student achievement and the percentage of ARRA funds allocated to develop RtI models of intervention as evidenced by achievement measured by MAP assessment scores in Communication Arts.

Null Hypothesis # 3. There is no relationship between student achievement and the percentage of ARRA funds allocated to develop core instructional materials and practice as evidenced by achievement measured by MAP assessment scores in Communication Arts.

Data Collection and Analysis Procedures

This study investigated how school districts spent stimulus funding in terms of formula grants, competitive grants, basic stabilization funds, and bonds (Schulte, 2009). Data collection was analyzed by calculating the percentage of dollars spent in each allowable category to determine funds used to establish a three-tiered intervention model, increase access to intervention materials for at-risk students, and determine if the funds spent had an impact on student achievement as measured by the Missouri Assessment Program (MAP) test scores in the area of Communication Arts at the elementary level. The researcher investigated possible connections between the percentage of funds used for materials and resources and the percentage of funds spent on professional development to support teachers understanding of the use of the products effectively in their classrooms by examining allotments in the three state budget line categories of 1100, 2100, and 2210.

Additional Limitations in the Revised Study Design

The researcher noted several additional limitations during the data collection of the study. In the initial study design, the researcher planned to interview a random sample of school districts to learn more about the products and services that were purchased under the budget categories ARRA Non-instructional Support Services (2100), and ARRA Improvement of Intervention Services (2210). This information would have allowed the researcher to determine if there were any correlations between monies spent for intervention supports and the professional development provided to teachers to effectively implement said interventions.

Category Restriction. Due to the change in study design, the researcher could not determine how much of the funds allocated within the three budget codes was used to directly impact the three-tiered intervention model of RtI, or other interventions since the information cannot be identified with the data the researcher obtained from the state Budget Office.

Rollback of Funding Amounts through Federal Agreement. Another limitation was in the budget allocations in the budget category of 1100 targeted for regular instruction under the State Fiscal Stabilization Funds. In order for states to be eligible for these funds, governors were required to sign assurances that the funds would be used to address teacher effectiveness, longitudinal data systems, rigorous standards, and low performing schools (Mead et al., 2010). However, many state proposals written to acquire these funds required them to reduce state support of education back to levels of FY 2006 that hindered their ability to use the stabilization funds to drive any new reform (USDOE Office of Inspector General, 2009). The researcher was limited in discovering if these

funds were used to allocate personnel to implementing interventions in a three-tiered model of RTI or rather to preserve positions that would have been eliminated due to reduction in state support and prevailing economic crisis.

Participants

The initial study design required the researcher to recruit participants from the Missouri School Directory provided from MODESE. These participants would have been determined based on those that responded to the initial email request sent to school districts throughout the state. The researcher intended to receive responses and study thirty small schools districts and thirty large school districts, based on student enrollment, so that data collected and analyzed could be generalized. With the change in design, the researcher created the random sample of thirty small and thirty large school districts and sent this information to the Budget Office in Jefferson City, MO, to collect the necessary data.

Instrumentation

The Missouri Assessment Program (MAP) was originally implemented to measure student progress on the Show-Me Standards and since has been realigned to Grade Level Expectations as outlined in requirements of No Child Left Behind, and scores are reported in overall scaled scores and achievement levels (CTB McGraw-Hill, 2007). “The MAP scale scores and achievement levels provide[d] summary evidence of student achievement in Communication Arts or Mathematics. Classroom teachers use[d] these scores as evidence of student achievement in these content areas” (CTB McGraw-Hill, 2007, p. 6). Teachers and administrators have used this information to plan and write curriculum aligned to the standards. “District and school administrators may compare their aggregate results with the state mean to better understand their strengths and weaknesses within a

content area” (CTB McGraw-Hill, 2007, p. 6). The MAP assessments have gone through stages of reliability including multiple versions of the assessment, field tests, content bias review, pilots and inter-rater. “To assess the divergent validity of the MAP tests, correlations were computed between the Math and Communication Arts scale scores for students who took both of the MAP subject area tests in 2007” (CTB McGraw-Hill, 2007, p. 71).

Conclusion

The American Recovery and Reinvestment Act of 2009 infused a great deal of financial assistance to school districts funneled through their state funding formulas. While there were assurances signed by state governors, much of the decision making for how to allocate the monies was left to individual school districts. Each school district had to submit a plan for use of allocated money within a two-year fiscal period (U. S. Department of Education, 2009). While there were nine budget categories through which money could be dispersed, the researcher focused on State Fiscal Stabilization Funds and Title I, Part A to determine if these additional funds were used to support three-tiered intervention models and if they impacted student achievement as measured by the Communication Arts scores on the MAP tests for the fiscal years in which the funds were allocated.

The researcher discovered that many school districts were not willing to voluntarily participate in the study by responding to initial email requests sent out by the researcher. The researcher did attempt several times to make contact with the school districts to no avail. The Missouri Department of Elementary and Secondary Education was willing to assist by gathering the necessary budget information to complete the proposed study design.

Descriptive statistics data indicated that much of the allocated money was placed in a fund that allowed school districts to maintain or hire staff, which was a consistent finding based on the literature of ARRA fund allocations. The descriptive data for state-wide MAP scores for grades three, four, and five indicated fairly flat improvement rates for the two years that ARRA funding was available for school districts. One of the tenets for this increased funding was to initiate reform, which would increase student achievement for students from preschool to post-secondary education (USDOE, 2009).

The following chapter will highlight the collected data in more detail to show how the ARRA funding was dispersed and allocated. Data tables will show results of regression data run through the SPSS statistical analysis software. This regression data allowed for controls of enrollment, outlier data, and MAP scores. Results are discussed in terms of how the data was related to the stated hypotheses to show how ARRA funding was dispersed and used to increase student achievement results on the Communication Arts MAP assessments at the elementary levels.

Chapter Four: Results

Observable Trends

The purpose of this research study was to investigate how school districts, in the state of Missouri, dispersed funds from the ARRA of 2009 to help drive educational reform or increased access to intervention materials for at-risk students in the area of reading. This chapter presents an overview of the financial data collected from MODESE and the Communication Arts assessment results from the Missouri Assessment Program at the elementary level. The financial data was derived from the Final Expenditure Reports (FER) of 60 school districts across the state of Missouri. The districts were divided into large and small districts based on enrollment of more than 3,000 and fewer than 3,000 students respectively. Three line items from the FER were collected including 1100 for regular instruction under the State Fiscal Stabilization Funds, 2100 non-instructional support services, and 2210 for professional development from Title I, Part A of the American Recovery and Reinvestment Act.

The researcher completed this study to determine if school districts placed funds in the 2100 funding code to make purchases that would support curriculum, and then to determine if matching or exceeding funds were placed in the 2210 funding code that would have indicated that professional development services were being used to support additional purchases. The researcher believed that purchases were made at the school district level without the matching professional development support or that professional development was planned that did not match the curricular materials were being implemented in the classroom.

Table 5.

ARRA Funding Allocations: Large Schools; 2009-2010 School Year

School District Code	ARRA 1100 FY 09-10	ARRA 2100 FY 09-10	ARRA 2210 FY 09-10
1001	\$760,087.38	\$4,763,958.00	\$30,656.10
1002	\$6,654,547.00	\$139,182.00	\$113,203.78
1003	\$1,606,996.35	\$129,972.99	\$0.00
1004	\$2,898,659.52	\$0.00	\$0.00
1005	\$3,290,501.00	\$0.00	\$30,800.00
1006	\$1,984,123.00	\$0.00	\$0.00
1007	\$976,272.00	\$23,480.93	\$0.00
1008	\$375,783.39	\$0.00	\$15,283.69
1009	\$2,269,150.00	\$0.00	\$341,094.48
1010	\$6,123,228.00	\$0.00	\$439,610.08
1011	\$6,872,616.00	\$80,700.00	\$1,600.00
1012	\$4,248,126.72	\$0.00	\$309,524.47
1013	\$4,843,302.00	\$22,542.00	\$91,641.00
1014	\$8,025,103.00	\$550,111.00	\$0.00
1015	\$1,792,639.00	\$0.00	\$0.00
1016	\$2,226,371.00	\$0.00	\$254,770.67
1017	\$2,069,473.00	\$0.00	\$0.00
1018	\$1,642,284.00	\$0.00	\$0.00
1019	\$1,858,100.00	\$0.00	\$64,907.00

1020	\$2,906,382.00	\$114,075.00	\$0.00
1021	\$634,518.25	\$618,813.45	\$0.00
1022	\$2,022,289.00	\$0.00	\$0.00
1023	\$748,945.00	\$0.00	\$0.00
1024	\$3,639,447.01	\$0.00	\$0.00
1025	\$0.00	\$0.00	\$44,509.00
1026	\$1,443,505.18	\$44,791.52	\$0.00
1027	\$3,581,336.99	\$223,501.91	\$930,202.58
1028	\$2,959,208.00	\$0.00	\$310,151.99
1029	\$789,853.21	\$0.00	\$190,629.60
1030	\$1,941,849.40	\$0.00	\$0.00

Note: Source: Missouri Department of Elementary and Secondary Education Budget Office.

“The problems that have arisen with traditional professional-development activities originate[d] to some extent from disconnect between activities at the district and school levels” (Wong & Nicotera, 2007, p. 180). Since school districts only had two fiscal years to make expenditures from the ARRA, purchases and matching professional development needed to be decided upon efficiently.

Research Question 1:

How have ARRA funds been used in the state of Missouri to fund improvement of instruction services, non-instruction support services and regular instruction to advance educational reform efforts?

The funds for the American Recovery and Reinvestment Act were dispersed to states and school districts to be used over the course of two fiscal years (USDOE, 2009).

The data collected was from a representative sample of large and small school districts

based on student enrollment. The data from the large school districts indicated that more funds were dispersed to the budget code allocated for maintaining personnel than the codes for curricular support and professional development (Tables 5 & 6).

Table 6.

ARRA Funding Allocations: Large Schools; 2010-2011 School Year

School District Code	ARRA 110 FY 10-11	ARRA 2100 FY 10-11	ARRA 2210 FY 10-11
1001	\$2,425,460.43	\$35,026.71	\$182,064.50
1002	\$2,537,620.00	\$0.00	\$0.00
1003	\$712,142.34	\$109,514.51	\$0.00
1004	\$1,367,568.00	\$0.00	\$0.00
1005	\$803,704.09	\$59,636.35	\$172,627.41
1006	\$723,762.00	\$0.00	\$0.00
1007	\$0.00	\$26,910.84	\$64,216.50
1008	\$0.00	\$0.00	\$0.00
1009	\$902,800.00	\$0.00	\$144,766.49
1010	\$2,718,784.00	\$0.00	\$255,377.26
1011	\$2,133,109.00	\$0.00	\$0.00
1012	\$1,060,572.35	\$0.00	\$87,086.52
1013	\$293,624.55	\$183,849.52	\$225,537.65
1014	\$0.00	\$567,043.00	\$80,599.00
1015	\$679,024.00	\$0.00	\$0.00
1016	\$631,636.00	\$0.00	\$1,334,540.17

1017	\$591,387.00	\$0.00	\$0.00
1018	\$731,392.00	\$0.00	\$0.00
1019	\$1,113,451.00	\$253,940.00	\$175,845.65
1020	\$2,142,989.00	\$383,953.00	\$0.00
1021	\$316,882.03	\$147,113.97	\$0.00
1022	\$611,909.78	\$9,717.11	\$0.00
1023	\$255,140.00	\$0.00	\$0.00
1024	\$1,474,212.00	\$0.00	\$0.00
1025	\$0.00	\$0.00	\$0.00
1026	\$633,726.38	\$90,314.99	\$0.00
1027	\$1,753,716.00	\$0.00	\$180,246.06
1028	\$1,250,211.78	\$0.00	\$235,717.29
1029	\$94,359.00	\$0.00	\$19,147.87
1030	\$668,655.76	\$0.00	\$0.00

Note: Source: Missouri Department of Elementary and Secondary Education Budget Office.

School district 1008 and 1025 allocated all of their ARRA funds in the first year of funding availability and no funds in the second year. Both of these school districts were in the large school district strata. Additional information was not available to determine the reason for the funds to be allocated in the first year other than the spending timeline was determined by each participating school district.

During the two fiscal years that funds were available to school districts, eight of the 30, or 26%, of the large districts in the study allocated no funds to non-instructional support materials (2100), or professional development (2210) services.

Table 7.

ARRA Funding Allocations: Small Schools; 2009-2010 School Year

School District Code	AARA 1100 FY 09-10	ARRA 2100 FY 09-10	ARRA 2210 FY 09-10
2001	\$194,047.00	\$1,800.00	\$0.00
2002	\$0.00	\$0.00	\$17,500.00
2003	\$29,573.00	\$0.00	\$0.00
2004	\$70,898.00	\$23,931.00	\$0.00
2005	\$163,665.00	\$3,000.00	\$0.00
2006	\$452,002.00	\$5,300.00	\$0.00
2007	\$1,281,885.00	\$0.00	\$0.00
2008	\$909,001.76	\$23,721.96	\$0.00
2009	\$990,565.00	\$0.00	\$0.00
2010	\$102,073.77	\$0.00	\$0.00
2011	\$276,165.00	\$0.00	\$6,552.00
2012	\$1,504,777.33	\$0.00	\$26,960.93
2013	\$1,418,300.33	\$19,723.93	\$728,101.13
2014	\$228,276.00	\$0.00	\$0.00
2015	\$979,023.00	\$0.00	\$0.00
2016	\$384,547.00	\$0.00	\$0.00
2017	\$855,700.00	\$0.00	\$0.00
2018	\$364,595.00	\$0.00	\$1,667.00
2019	\$349,714.00	\$0.00	\$6,000.00

2020	\$1,031,238.22	\$0.00	\$0.00
2021	\$285,897.00	\$0.00	\$48,804.00
2022	\$386,506.00	\$0.00	\$950.00
2023	\$228,971.00	\$0.00	\$0.00
2024	\$75,780.00	\$0.00	\$0.00
2025	\$153,829.98	\$10,091.76	\$3,585.04
2026	\$134,036.00	\$0.00	\$0.00
2027	\$252,730.00	\$0.00	\$0.00
2028	\$283,629.00	\$4,500.00	\$0.00
2029	\$1,663,956.00	\$0.00	\$129,294.85
2030	\$1,877,325.00	\$0.00	\$5,722.54

Note: Source: Missouri Department of Elementary and Secondary Education Budget Office.

This data indicated to the researcher that over the course of the two fiscal years, 19 of the 30, or 63%, of the school districts placed minimal or no money in the funding code for professional development (2210). The data also indicated that 22, or 73%, of the large school districts in the sample placed minimal or no money in the funding code for non-instructional support services (2100) that would have supported a three-tiered intervention model for reading. In the original design of the study, the researcher would have had the opportunity to follow-up with districts to determine reasons for these choices. One outlier district in the data indicated that one school district placed no money in the funding code for regular instruction (1100), which would have supported maintaining personnel. There was also one outlier district in the small school category, which also did not place funds in the regular instruction (1100) funding code which would have supported and maintained personnel (Tables 7 & 8).

Table 8.

ARRA Funding Allocations: Small Schools; 2010-2011 School Year

School District Code	ARRA 1100 FY 10-11	ARRA 2100 FY 10-11	ARRA 2210 FY 10-11
2001	\$68,038.00	\$0.00	\$0.00
2002	\$0.00	\$0.00	\$15,000.00
2003	\$18,504.00	\$0.00	\$0.00
2004	\$24,986.08	\$11,015.36	\$0.00
2005	\$33,144.00	\$0.00	\$0.00
2006	\$104,808.00	\$0.00	\$0.00
2007	\$456,846.00	\$0.00	\$0.00
2008	\$538,031.39	\$4,000.00	\$0.00
2009	\$400,514.00	\$0.00	\$0.00
2010	\$35,116.00	\$0.00	\$0.00
2011	\$105,772.00	\$0.00	\$0.00
2012	\$538,968.63	\$0.00	\$71,660.11
2013	\$649,168.00	\$0.00	\$14,374.00
2014	\$70,796.00	\$0.00	\$0.00
2015	\$212,996.00	\$11,328.95	\$16,410.18
2016	\$141,680.00	\$0.00	\$793.00
2017	\$281,250.00	\$0.00	\$0.00
2018	\$72,532.21	\$0.00	\$19,495.68
2019	\$117,928.66	\$0.00	\$5,067.00

2020	\$411,804.00	\$0.00	\$4,143.00
2021	\$0.00	\$0.00	\$37,390.50
2022	\$145,212.00	\$0.00	\$0.00
2023	\$107,074.00	\$0.00	\$0.00
2024	\$18,536.00	\$0.00	\$0.00
2025	\$77,753.16	\$0.00	\$0.00
2026	\$57,802.00	\$0.00	\$0.00
2027	\$56,064.00	\$34,276.00	\$0.00
2028	\$100,660.00	\$0.00	\$189.00
2029	\$598,976.00	\$0.00	\$61,560.07
2030	\$740,120.00	\$0.00	\$19,285.30

Note: Source: Missouri Department of Elementary and Secondary Education Budget Office.

During the two fiscal years in which funds were available to school districts, eight of the 30, or 26%, of the small districts in the study allocated no funds to non-instructional support materials (2100), or professional development (2210) services. This data indicated to the researcher that over the course of the two fiscal years, 18 of the 20, or 60%, of the small school districts placed minimal or no money in the funding code for professional development (2210). The data also indicated that 10, or 33%, of the small school districts in the sample placed minimal or no money in the funding code for non-instructional support services (2100), which would have supported a three-tiered intervention model for reading. In the original design of the study, the researcher would have had the opportunity to follow-up with districts to determine reasons for these choices.

The data in Tables 5 through 8 indicated that 14, or 46%, of the large districts and 10, or 33%, of the small districts allocated money for non-instructional support services

(2100), which was allocated for support of a three-tiered intervention model for reading. The data also indicated that 17, or 56%, of both the large and small school districts allocated money for professional development (2210) to support teacher learning and growth. “The most effective strategy for improving the performance of educators and students is professional learning” (Hirsh, 2012, p. 11). The data indicated that a little more than half of the districts placed funds in the category, which allowed for expenditures for professional development.

Research Question 2:

How have ARRA funds been used in the state of Missouri to expand or support the three-tiered model of RtI with the intent to increase student achievement?

In addition to the financial data, the researcher collected assessment data from the Communication Arts MAP test for the 2009-2010 and 2010-2011 school years from the MODESE website. This data was collected to determine if increased funds available to school districts through the ARRA was used to maintain personnel through the State Fiscal Stabilization Funds, increased support for a three tiered model of intervention through curricular supports, or professional development training provided to teachers made an impact on student achievement scores (Tables 9-14).

Table 9.

Percentage of Third Grade Students in Large School Districts Scoring Proficient or Advanced on the Communication Arts MAP

School District Code	2010 Prf/Adv Gr. 3	2011 Prf/Adv Gr. 3	School District Code	2010 Prf/Adv Gr. 3	2011 Prf/Adv Gr. 3
State Threshold	43.9	44.5	State Threshold	43.9	44.5
1001	45.3	43.3	1016	47.4	41.3
1002	38.4	45.7	1017	51.7	47.9
1003	42.7	49.7	1018	46.4	60.5
1004	46.1	52.6	1019	44.5	46.8
1005	61.3	55.2	1020	40.9	36.2
1006	50.9	50	1021	42.2	38.7
1007	45.5	42.6	1022	35.5	43.0
1008	54.3	45.8	1023	58.7	54.7
1009	52.3	48.2	1024	43.4	45.7
1010	45.0	40.9	1025	54.7	49.0
1011	58.6	58.6	1026	53.3	51.4
1012	52.1	49.1	1027	29.2	29.7
1013	31.8	30.2	1028	29.9	24.8
1014	39.0	38.1	1029	41.1	43.0
1015	56.0	48.8	1030	27.0	37.9

Note: Source: Missouri Department of Elementary and Secondary Education.

Table 10.

Percentage of Third Grade Students in Small School Districts Scoring Proficient or Advanced on the Communication Arts MAP

School District Code	2010 Prf/Adv Gr. 3	2011 Prf/Adv Gr. 3	School District Code	2010 Prf/Adv Gr. 3	2011 Prf/Adv Gr. 3
State Threshold	43.9	44.5	State Threshold	43.9	44.5
2001	30.4	28.6	2016	23.4	40.5
2002	45.1	43.5	2017	46.6	49.3
2003	20.0	25.0	2018	51.8	42.7
2004	41.7	30.0	2019	55.3	56.5
2005	61.1	50.0	2020	42.6	52.5
2006	37.5	25.7	2021	60.9	36.8
2007	30.8	33.3	2022	76.5	47.1
2008	37.6	50.6	2023	22.0	25.0
2009	36.6	466.2	2024	60.0	0.0
2010	70.0	50.0	2025	70.6	48.3
2011	44.1	50.0	2026	45.2	39.5
2012	31.7	34.0	2027	29.2	50
2013	38.4	41.7	2028	40.0	52.9
2014	55.3	50.9	2029	46.8	50.3
2015	32.4	55.8	2030	48.7	53.5

Note: Source: Missouri Department of Elementary and Secondary Education.

Third grade data indicated minimum growth between the 2010 and 2011 school years in Communication Arts scores. In the sample of large school districts, 18 of the 30 districts, or 60%, scored above the state threshold on the Communication Arts MAP test in 2010, and 17 of 30 districts, or 56%, scored above the state threshold in 2011. In the sample of small school districts, 15 of the 30 districts, or 50%, scored above the state threshold in 2010, and 16 of the 30 districts, or 53%, scored above the state threshold in 2011. The data showed that large districts experienced a slight decline between the 2010 and 2011 school years, but generally, the scores appeared to be flat.

Fourth grade MAP data indicated a decline of scores between the 2010 and 2011 school years in Communication Arts scores. In the sample of large school districts, 16 of the 30 districts, or 53%, scored above state threshold on the Communication Arts MAP test in 2010, and 18 of 30 districts, or 60%, scored above the state threshold in 2011. In the sample of small school districts, 15 of the 30 districts, or 50%, scored above the state threshold in 2010, and 18 of the 30 districts, or 60%, scored above the state threshold in 2011.

Table 11.

Percentage of Fourth Grade Students in Large School Districts Scoring Proficient or Advanced on the Communication Arts MAP

School District Code	2010 Prf/Adv Gr. 4	2011 Prf/Adv Gr.4	School District Code	2010 Prf/Adv Gr. 4	2011 Prf/Adv Gr.4
State Threshold	51.7	52.7	State Threshold	51.7	52.7
1001	52.9	51.2	1016	53.4	54.6
1002	51.0	49.9	1017	55.7	61.2
1003	60.3	56.0	1018	68.1	65.8
1004	55.2	63.0	1019	51.5	54.6
1005	67.2	69.6	1020	43.1	47.9
1006	63.6	63.1	1021	45.8	46.9
1007	53.1	53.9	1022	49.6	46.0
1008	47.6	51.0	1023	60.9	65.5
1009	61.1	63.2	1024	52.5	55.1
1010	50.5	52.8	1025	56.5	60.1
1011	64.7	65.7	1026	50.4	59.4
1012	64.4	64.9	1027	38	37.6
1013	34.7	39.8	1028	36.6	43.3
1014	45.8	48.3	1029	49.6	48.6
1015	53.0	58.5	1030	38.5	45.6

Note: Source: Missouri Department of Elementary and Secondary Education.

Table 12.

Percentage of Fourth Grade Students in Small School Districts Scoring Proficient or Advanced on the Communication Arts MAP

School District Code	2010 Prf/Adv Gr. 4	2011 Prf/Adv Gr.4	School District Code	2010 Prf/Adv Gr. 4	2011 Prf/Adv Gr.4
State Threshold	51.7	52.7	State Threshold	51.7	52.7
2001	66.7	50.0	2016	48.8	39.5
2002	45.6	53.9	2017	41.8	63.8
2003	20.0	25.0	2018	59.1	58.7
2004	73.3	54.5	2019	57.8	51.5
2005	50.0	76.5	2020	52.2	50.4
2006	61.9	51.0	2021	85.7	71.4
2007	35.6	46.1	2022	50.0	53.1
2008	65.6	51.5	2023	36.0	53.1
2009	47.7	50.6	2024	75.0	50.0
2010	45.5	100.0	2025	40.5	55.3
2011	45.9	68.6	2026	74.6	61.2
2012	42.5	48.5	2027	55.6	56.5
2013	51.7	51.4	2028	80.4	55.8
2014	43.1	42.2	2029	57.4	59.5
2015	50.4	59.0	2030	55.1	53.4

Note: Source: Missouri Department of Elementary and Secondary Education.

Table 13.

Percentage of Fifth Grade Students in Large School Districts Scoring Proficient or Advanced on the Communication Arts MAP

School District Code	2010 Prf/Adv Gr. 5	2011 Prf/Adv Gr. 5	School District Code	2010 Prf/Adv Gr. 5	2011 Prf/Adv Gr. 5
State Threshold	51.8	52	State Threshold	51.8	52
1001	51.1	52.6	1016	54.4	50.4
1002	51.2	53.2	1017	49.8	59.8
1003	59.3	64.6	1018	54.8	61.6
1004	58.7	60.9	1019	52.0	61.3
1005	67.7	64.7	1020	52.1	48.4
1006	58.3	61.3	1021	48.2	48.9
1007	56.2	53.6	1022	41.8	44.3
1008	47.8	52.8	1023	64.9	66.3
1009	57.4	57.1	1024	50.0	53.5
1010	55.0	53.8	1025	53.2	44.8
1011	66.2	64.4	1026	56.6	49.2
1012	65.1	63.9	1027	40.8	36.5
1013	42.3	36.2	1028	41.1	39.7
1014	51.9	47.1	1029	41.7	49.6
1015	54.8	52.1	1030	35.3	32.8

Note: Source: Missouri Department of Elementary and Secondary Education

Table 14.

Percentage of Fifth Grade Students in Small School Districts Scoring Proficient or Advanced on the Communication Arts MAP

School District Code	2010 Prf/Adv Gr. 5	2011 Prf/Adv Gr. 5	School District Code	2010 Prf/Adv Gr. 5	2011 Prf/Adv Gr. 5
State Threshold	51.8	52	State Threshold	51.8	52
2001	47.1	43.8	2016	43.8	40
2002	44.2	49.3	2017	41.7	43.2
2003	33.3	25	2018	46.3	47.8
2004	75	52.9	2019	40.4	59.1
2005	55.6	43.8	2020	51.5	48.7
2006	51	58.5	2021	71.9	66.7
2007	54.7	43.3	2022	57.1	42.2
2008	66.3	52.1	2023	47.4	40.7
2009	56.3	40.5	2024	66.7	75
2010	60	63.6	2025	50	42.1
2011	30.3	39.5	2026	61.7	69.6
2012	39.1	50.6	2027	42.9	50
2013	42.1	57.3	2028	69.2	52.2
2014	38.7	46.6	2029	52.5	57.9
2015	49.2	56.4	2030	51.1	53.1

Note: Source: Missouri Department of Elementary and Secondary Education.

Fifth grade MAP data indicated minimum growth between the 2010 and 2011 school years in Communication Arts scores. In the sample of large school districts, 17

of the 30 districts, or 56%, scored above state threshold on the Communication Arts MAP test in 2010, and 18 of 30 districts, or 60%, scored above the state threshold in 2011. In the sample of small school districts, 12 of the 30 districts, or 40%, scored above the state threshold in 2010, and 12 of the 30 districts, or 40%, scored above the state threshold in 2011. The data showed that small districts had no change between the 2010 and 2011 school years, and generally, the scores appeared to be flat.

Research Question 3. (Hypothesis 1):

What is the observable relationship between funding through Title I, Part A allocations and student achievement on Communication Arts MAP? [Null Hypothesis: There is no relationship between the percentage of ARRA funds spent on the general improvement of instruction services and the percentage of students entering a RtI model of intervention at Tier II or Tier III as defined by the state of Missouri.]

The researcher was unable to gather specific data from school districts about the percentage of students that were placed in Tier II and Tier III interventions for reading due to the change in the study design. Since no data was available to allow analysis for this hypothesis, the hypothesis is treated as a research question. Financial data from the 2100 budget code of non-instructional support materials from the Title I, Part A allocations indicated that there were minimal amounts of funds earmarked for the general improvement of instructional services (Tables 5 & 6). Funds placed in this budget code supported interventions under the umbrella of RtI. The researcher wanted to determine how school districts were using those funds to support or expand interventions for students who were at-risk for not meeting grade level expectations.

The most recent data included in State Consolidation Performance Report issued by the U.S. Department of Education (2011) indicated that schools receiving Title I, Part A funding had only a small percentage make the Adequate Yearly Progress target (Table 15). Title I services were provided to students who have been identified as at-risk for not meeting state standards (USDOE, 2010). As defined in Chapter One, Adequate Yearly Progress is the yearly percentage of proficiency on state assessments and other measures required under No Child Left Behind legislation (U.S. Department of Elementary and Secondary Education, 2011). Adequate Yearly Progress was a combination of criteria which included proficiency targets set, and adjusted yearly, for state assessment results, attendance and graduation rates, and testing participation of students in pre-determined subgroup categories, such as Title I funds eligible (U.S. Department of Elementary and Secondary Education, 2011).

Table 15.

Title I School Accountability

Title I Schools	# Title I Schools	# Title I Schools that Made AYP in SY 2010-2011	Percentage of Title I Schools That Made AYP in SY 2010-2011
All Title I Schools	1,167	278	23.8
Schoolwide (SWP) Title I Schools	684	138	20.2
Targeted Assistance (TAS) Title I Schools	483	140	29.0

Note. Reprinted from: "Consolidated State Performance Report Parts I and II," U. S. Department of Education, 2011 p.29. Retrieved from: <http://dese.mo.gov/dsm/documents/SY10-11CSPRPartIandII.pdf>.

This data along with the data that indicated minimal amounts of funds allocated to the general improvement of instructional services led the researcher to decide there is no

relationship between the percentage of ARRA funds spent on the general improvement of instruction services and the percentage of students entering a RtI model of intervention at Tier II or Tier III as defined by the state of Missouri.

Hypothesis 2:

Null Hypothesis: There is no relationship between student achievement and the percentage of ARRA funds allocated to develop RtI models of intervention as evidenced by achievement measured by MAP assessment scores in Communication Arts.

The American Recovery and Reinvestment allocated funds to be spent during the 2009-2010 and 2010-2011 school years. Regression analysis was applied to data to determine if there were correlations between the funds used to support personnel, RtI, professional development and MAP scores. Hypothesis 2 was addressed with the following regression data showing funding from the 2009-2010 school year and assessment data from the 2010 school year (Tables 16-18). The researcher examined data from the non-instructional support (2100) budget code and communication arts data from the MAP assessment to determine if there was a relationship between funds allocated and student achievement results. The funds that were allocated in the (2100) budget code were used to provide support for intervention under the umbrella of RtI.

Table 16.

Regression Data for 2009-2010 ARRA Funding Predicting 2010 MAP Scores, Grade 3

		2010 Prf/Adv Gr. 3	ARRA 1100	ARRA 2100	ARRA 2210
Pearson Correlation	2010 Prf/Adv Gr. 3	1.000	-.088	-.017	-.159
	ARRA 1100	-.088	1.000	.006	.307
	ARRA 2100	-.017	.006	1.000	-.013
	ARRA 2210	-.159	.307	-.013	1.000

Note. Critical Value = .250

Based on the data analysis, there was no significant relationship between the first year of funding in non-instructional support (2100) budget category of the American Recovery and Reinvestment Act and student achievement on MAP assessments for Grade 3. The test values (-.017), as shown in Table 16 was between the critical values of ± 0.250 . Therefore, the null hypothesis was not rejected, and there is no significant relationship between funding category 2100, and student achievement on the 2010 Communication Arts MAP. In addition, all test values (0.088, -.017, and -0.159), as shown in Table 16 were between the critical values of ± 0.250 . Therefore, the null hypothesis was not rejected in each case, and there is no significant relationship between funding categories 1100, 2100, and 2210 and student achievement on the 2010 Communication Arts MAP, respectively.

Table 17.

Regression Data for 2009-2010 ARRA Funding Predicting 2010 MAP Scores, Grade 4

		2011 Prf/Adv Gr.4	ARRA 1100	ARRA 2100	ARRA 2210
Pearson Correlation	2011 Prf/Adv Gr.4	1.000	-.085	-.082	-.178
	ARRA 1100	-.085	1.000	.006	.307
	ARRA 2100	-.082	.006	1.000	-.013
	ARRA 2210	-.178	.307	-.013	1.000

Note. Critical Value = .250

Based on the data analysis, there was no significant relationship between the first year of funding in non-instructional support (2100) budget category of the American Recovery and Reinvestment Act and student achievement on MAP assessments for Grade 4. The test values (-.082), as shown in Table 17 was between the critical values of ± 0.250 . Therefore, the null hypothesis was not rejected, and there is no significant relationship between funding category 2100, and student achievement on the 2010 Communication Arts MAP. In addition, all test values (-0.085, -.082, and -0.178), as shown in Table 17 were between the critical values of ± 0.250 . Therefore, the null hypothesis was not rejected in each case, and there is no significant relationship between funding categories 1100, 2100, and 2210 and student achievement on the 2010 Communication Arts MAP, respectively.

Table 18.

Regression Data for 2009-2010 ARRA Funding Predicting 2010 MAP Scores, Grade 5

		2011 Prf/Adv Gr. 5	ARRA 1100	ARRA 2100	ARRA 2210
Pearson Correlation	2011 Prf/Adv Gr. 5	1.000	.072	-.002	-.067
	ARRA 1100	.072	1.000	.006	.307
	ARRA 2100	-.002	.006	1.000	-.013
	ARRA 2210	-.067	.307	-.013	1.000

Note. Critical Value = .250.

Based on the data analysis, there was no significant relationship between the first year of funding in non-instructional support (2100) budget category of the American Recovery and Reinvestment Act and student achievement on MAP assessments for Grade 5. The test values (-.002), as shown in Table 18 was between the critical values of ± 0.250 . Therefore, the null hypothesis was not rejected, and there is no significant relationship between funding category 2100, and student achievement on the 2010 Communication Arts MAP. In addition, all test values (0.072, -.002, and -0.067), as shown in Table 18 were between the critical values of ± 0.250 . Therefore, the null hypothesis was not rejected in each case, and there is no significant relationship between funding categories 1100, 2100, and 2210 and student achievement on the 2010 Communication Arts MAP, respectively.

This was the first year that funds were available from the American Recovery and Reinvestment Act, so districts may not have spent the funds given the two-year timeframe.

The researcher also examined regression data to determine if there was a relationship between funds that were spent during the 2009-2010 school year and student achievement scores on the 2011 MAP assessment in the area of Communication Arts (Tables 19-21).

Table 19.

Regression Data for 2009-2010 ARRA Funding Predicting 2011 MAP Scores, Grade 3

		2011 Prf/Adv Gr. 3	ARRA 1100	ARRA 2100	ARRA 2210
Pearson Correlation	2011 Prf/Adv Gr. 3	1.000	-.032	-.028	-.083
	ARRA 1100	-.032	1.000	.006	.307
	ARRA 2100	-.028	.006	1.000	-.013
	ARRA 2210	-.083	.307	-.013	1.000

Note. Critical Value = .250.

Based on the data analysis, there was no significant relationship between the first year of funding in non-instructional support (2100) budget category of the American Recovery and Reinvestment Act and student achievement on MAP assessments for Grade 3. The test values (-.028), as shown in Table 19 was between the critical values of ± 0.250 . Therefore, the null hypothesis was not rejected, and there is no significant relationship between funding category 2100, and student achievement on the 2011 Communication Arts MAP. In addition, all test values (-0.032, -.028, and -0.083), as shown in Table 19 were between the critical values of ± 0.250 . Therefore, the null hypothesis was not rejected in each case, and there is no significant relationship between funding categories 1100,

2100, and 2210 and student achievement on the 2011 Communication Arts MAP, respectively.

Table 20.

Regression Data for 2009-2010 ARRA Funding Predicting 2011 MAP Scores, Grade 4

		2011 Prf/Adv Gr.4	ARRA 1100	ARRA 2100	ARRA 2210
Pearson Correlation	2011 Prf/Adv Gr.4	1.000	-.085	-.082	-.178
	ARRA 1100	-.085	1.000	.006	.307
	ARRA 2100	-.082	.006	1.000	-.013
	ARRA 2210	-.178	.307	-.013	1.000

Note. Critical Value = .250

Based on the data analysis, there was no significant relationship between the first year of funding in non-instructional support (2100) budget category of the American Recovery and Reinvestment Act and student achievement on MAP assessments for Grade 4. The test values (-.082), as shown in Table 20 was between the critical values of ± 0.250 . Therefore, the null hypothesis was not rejected, and there is no significant relationship between funding category 2100, and student achievement on the 2011 Communication Arts MAP. In addition, all test values (-0.085, -.082, and -0.178), as shown in Table 20 were between the critical values of ± 0.250 . Therefore, the null hypothesis was not rejected in each case, and there is no significant relationship between funding categories 1100, 2100, and 2210 and student achievement on the 2011 Communication Arts MAP, respectively.

Table 21.

Regression Data for 2009-2010 ARRA Funding Predicting 2011 MAP Scores, Grade 5

		2011 Prf/Adv Gr. 5	ARRA 1100	ARRA 2100	ARRA 2210
Pearson Correlation	2011 Prf/Adv Gr. 5	1.000	.072	-.002	-.067
	ARRA 1100	.072	1.000	.006	.307
	ARRA 2100	-.002	.006	1.000	-.013
	ARRA 2210	-.067	.307	-.013	1.000

Note. Critical Value = .250

Based on the data analysis, there was no significant relationship between the first year of funding in non-instructional support (2100) budget category of the American Recovery and Reinvestment Act and student achievement on MAP assessments for Grade 5. The test values (-.002), as shown in Table 21 was between the critical values of ± 0.250 . Therefore, the null hypothesis was not rejected, and there is no significant relationship between funding category 2100, and student achievement on the 2011 Communication Arts MAP. In addition, all test values (0.072, -.002, and -0.067), as shown in Table 21 were between the critical values of ± 0.250 . Therefore, the null hypothesis was not rejected in each case, and there is no significant relationship between funding categories 1100, 2100, and 2210 and student achievement on the 2011 Communication Arts MAP, respectively.

Based on data analysis, there was no significant relationship in student achievement on the MAP assessment during the 2011 school year because of the allocation of funds that were spent during the 2009-2010 school year.

The American Recovery and Reinvestment Act allocated funds for the 2010-2011 school year, so regression data was run again to determine if there was a relationship in the amount of funds used from the non-instructional support (2100) budget category in the stimulus package and student achievement for the second year of the allocation (Tables 22-24). These tables represent how funds spent during the 2010-2011 school year were related to the Communication Arts MAP scores for the 2011 school year which allowed the researcher to determine if there was a relationship between funds allocated and spent during the second year of the American Recovery and Reinvestment Act and the student achievement results on the MAP assessment.

Table 22.

Regression Data for 2010-2011 ARRA Funding Predicting 2011 MAP Scores, Grade 3

		2011 Prf/Adv Gr. 3	ARRA 1100	ARRA 2100	ARRA 2210
Pearson Correlation	2011 Prf/Adv Gr. 3	1.000	-.015	-.061	-.058
	ARRA 1100	-.015	1.000	.093	.181
	ARRA 2100	-.061	.093	1.000	.039
	ARRA 2210	-.058	.181	.039	1.000

Note. Critical Value = .250

Based on the data analysis, there was no significant relationship between the second year of funding in non-instructional support (2100) budget category of the American Recovery and Reinvestment Act and student achievement on MAP assessments for Grade 3. The test values (-.061), as shown in Table 22 was between the critical values of ± 0.250 . Therefore, the null hypothesis was not rejected, and there is no significant relationship between funding category 2100, and student achievement on the 2011

Communication Arts MAP. In addition, all test values (-0.015, -.061, and -0.058), as shown in Table 22 were between the critical values of ± 0.250 . Therefore, the null hypothesis was not rejected in each case, and there is no significant relationship between funding categories 1100, 2100, and 2210 and student achievement on the 2011 Communication Arts MAP, respectively.

Table 23.

Regression Data for 2010-2011 ARRA Funding Predicting 2011 MAP Scores, Grade 4

		2011 Prf/Adv Gr.4	ARRA 1100	ARRA 2100	ARRA 2210
Pearson Correlation	2011 Prf/Adv Gr.4	1.000	-.085	-.082	-.178
	ARRA 1100	-.085	1.000	.006	.307
	ARRA 2100	-.082	.006	1.000	-.013
	ARRA 2210	-.178	.307	-.013	1.000

Note. Critical Value = .250.

Based on the data analysis, there was no significant relationship between the second year of funding in non-instructional support (2100) budget category of the American Recovery and Reinvestment Act and student achievement on MAP assessments for Grade 4. The test values (-.082), as shown in Table 23 was between the critical values of ± 0.250 . Therefore, the null hypothesis was not rejected, and there is no significant relationship between funding category 2100, and student achievement on the 2011 Communication Arts MAP. In addition, all test values (-0.085, -.082, and -0.178), as shown in Table 23 were between the critical values of ± 0.250 . Therefore, the null hypothesis was not rejected in each case, and there is no significant relationship between

funding categories 1100, 2100, and 2210 and student achievement on the 2011 Communication Arts MAP, respectively.

Table 24.

Regression Data for 2010-2011 ARRA Funding Predicting 2011 MAP Scores, Grade 5

		2011 Prf/Adv Gr. 5	ARRA 1100	ARRA 2100	ARRA 2210
Pearson Correlation	2011 Prf/Adv Gr. 5	1.000	.072	-.002	-.067
	ARRA 1100	.072	1.000	.006	.307
	ARRA 2100	-.002	.006	1.000	-.013
	ARRA 2210	-.067	.307	-.013	1.000

Note: Critical Value = .250.

Based on the data analysis, there was no significant relationship between the second year of funding in non-instructional support (2100) budget category of the American Recovery and Reinvestment Act and student achievement on MAP assessments for Grade 5. The test values (-.002), as shown in Table 24 was between the critical values of ± 0.250 . Therefore, the null hypothesis was not rejected, and there is no significant relationship between funding category 2100, and student achievement on the 2011 Communication Arts MAP. In addition, all test values (-0.072, -.002, and -0.067), as shown in Table 24 were between the critical values of ± 0.250 . Therefore, the null hypothesis was not rejected in each case, and there is no significant relationship between funding categories 1100, 2100, and 2210 and student achievement on the 2011 Communication Arts MAP, respectively.

Based on the data analysis, there was no significant change in student achievement due to the allocated and spent funds during the 2010-2011 school year. While this data provided the researcher with a base of information, the statistics were run again to remove all outlier data and then to control for enrollment and the researcher found no significance.

Given this information, the researcher did not reject the Null Hypothesis 2: There is no relationship between student achievement and the percentage of ARRA funds allocated to develop RtI models of intervention as evidenced by achievement measured by MAP assessment scores in Communication Arts.

Hypothesis 3:

Null Hypothesis: There is no relationship between student achievement and the percentage of ARRA funds allocated to develop core instructional materials and practice as evidenced by achievement measured by MAP assessment scores in Communication Arts.

The researcher examined data from the regular instruction (1100) budget code, the professional development (2210) budget code and communication arts data from the MAP assessment to determine if there was a relationship between funds allocated and student achievement results. The funds allocated in the (1100) budget code were used to provide support for regular instruction include personnel and the (2210) budget code was used to support professional development. Hypotheses 3 was addressed with regression data showing funding from the 2009-2010 school year and assessment data from the 2010 school year (Tables 16-18).

Based on the data analysis, there was no significant relationship between the first year of funding in regular instruction (1100) and professional development (2210) budget categories of the American Recovery and Reinvestment Act and student achievement on

MAP assessments for Grade 3. The test values (0.088 and -0.159), as shown in Table 16 were between the critical values of ± 0.250 . Therefore, the null hypothesis was not rejected in each case, and there is no significant relationship between funding categories 1100 and 2210 and student achievement on the 2010 Communication Arts MAP, respectively.

Based on the data analysis, there was no significant relationship between the first year of funding in regular instruction (1100) and professional development (2210) budget categories of the American Recovery and Reinvestment Act and student achievement on MAP assessments for Grade 4. The test (-0.085 and -0.178), as shown in Table 17 were between the critical values of ± 0.250 . Therefore, the null hypothesis was not rejected in each case, and there is no significant relationship between funding categories 1100 and 2210 and student achievement on the 2010 Communication Arts MAP, respectively.

Based on the data analysis, there was no significant relationship between the first year of funding in regular instruction (1100) and professional development (2210) budget categories of the American Recovery and Reinvestment Act and student achievement on MAP assessments for Grade 5. The test values (0.072 and -0.067), as shown in Table 18 were between the critical values of ± 0.250 . Therefore, the null hypothesis was not rejected in each case, and there is no significant relationship between funding categories 1100 and 2210 and student achievement on the 2010 Communication Arts MAP, respectively.

Based on the data analysis, there was no significant relationship between the first year of funding in regular instruction (2100) or the professional development (2210) budget categories of the American Recovery and Reinvestment Act and student achievement on MAP assessments.

The researcher also examined regression data to determine if there was a relationship between funds that spent during the 2009-2010 school year and student achievement scores on the 2011 MAP assessment in the area of Communication Arts (Tables 19-21).

Based on the data analysis, there was no significant relationship between the first year of funding in regular instruction (1100) and professional development (2210) budget categories of the American Recovery and Reinvestment Act and student achievement on MAP assessments for Grade 3. The test values (-0.032 and -0.083), as shown in Table 19 were between the critical values of ± 0.250 . Therefore, the null hypothesis was not rejected in each case, and there is no significant relationship between funding categories 1100 and 2210 and student achievement on the 2011 Communication Arts MAP, respectively.

Based on the data analysis, there was no significant relationship between the first year of funding in regular instruction (1100) and professional development (2210) budget categories of the American Recovery and Reinvestment Act and student achievement on MAP assessments for Grade 4. The test values (-0.085 and -0.178), as shown in Table 20 were between the critical values of ± 0.250 . Therefore, the null hypothesis was not rejected in each case, and there is no significant relationship between funding categories 1100 and 2210 and student achievement on the 2011 Communication Arts MAP, respectively.

Based on the data analysis, there was no significant relationship between the first year of funding in regular instruction (1100) and professional development (2210) budget categories of the American Recovery and Reinvestment Act and student achievement on MAP assessments for Grade 5. The test values (0.072 and -0.067), as shown in Table 21 were between the critical values of ± 0.250 . Therefore, the null hypothesis was not rejected

in each case, and there is no significant relationship between funding categories 1100 and 2210 and student achievement on the 2011 Communication Arts MAP, respectively.

Based on data analysis, there was no significant relationship in student achievement on the MAP assessment during the 2011 school year due to the allocated and spent funds during the 2009-2010 school year.

The American Recovery and Reinvestment Act allocated funds for the 2010-2011 school year, so regression data was run again to determine if there was a relationship in the amount of funds used from the regular instruction (1100) and professional development (2210) budget categories in the stimulus package and student achievement for the second year of the allocation (Tables 22-24).

Based on the data analysis, there was no significant relationship between the second year of funding in regular instruction (1100) and professional development (2210) budget categories of the American Recovery and Reinvestment Act and student achievement on MAP assessments for Grade 3. The test values (-0.015 and -0.058), as shown in Table 22 were between the critical values of ± 0.250 . Therefore, the null hypothesis was not rejected in each case, and there is no significant relationship between funding categories 1100 and 2210 and student achievement on the 2011 Communication Arts MAP, respectively.

Based on the data analysis, there was no significant relationship between the second year of funding in regular instruction (1100) and professional development (2210) budget categories of the American Recovery and Reinvestment Act and student achievement on MAP assessments for Grade 4. The test values (-0.085 and -0.178), as shown in Table 23 were between the critical values of ± 0.250 . Therefore, the null

hypothesis was not rejected in each case, and there is no significant relationship between funding categories 1100 and 2210 and student achievement on the 2011 Communication Arts MAP, respectively.

Based on the data analysis, there was no significant relationship between the second year of funding in regular instruction (1100) and professional development (2210) budget categories of the American Recovery and Reinvestment Act and student achievement on MAP assessments for Grade 5. The test values (-0.072 and -0.067), as shown in Table 24 were between the critical values of ± 0.250 . Therefore, the null hypothesis was not rejected in each case, and there is no significant relationship between funding categories 1100 and 2210 and student achievement on the 2011 Communication Arts MAP, respectively.

Based on the data analysis, there was no significant change in student achievement because of the funds allocated and spent during the 2010-2011 school year. While this data provided the researcher with a base of information, the statistics were run again to remove all outlier data and then to control for enrollment and the researcher found no significance.

Given this information, the researcher did not reject the Null Hypothesis 3: There is no relationship between student achievement and the percentage of ARRA funds allocated to develop RtI models of intervention as evidenced by achievement measured by MAP assessment scores in Communication Arts.

When data was analyzed for all 60 school districts for the 2010 MAP scores third grade had 55% of the districts, fourth grade had 51% of the districts, and fifth grade had 48% of the districts that scored better than the state determined threshold. On the 2011

MAP 55% of the third, 60% of the fourth, and 50% of the fifth grade in the 60 districts scored above the state threshold.

Conclusion

The data results presented in this chapter were originally to be collected via superintendents and financial officers at the sixty school districts in the random sample. The researcher reached out to school districts via email and provided a cover letter that detailed the parameters of the study. After several additional email attempts and personal phone calls to school districts it was clear that not enough schools were willing to participate by providing financial data and agreeing to follow-up interviews. Since the researcher was unsuccessful in this method of data collection, following IRB approval for an amended research design, the data was provided by the Budget Office at MODESE. The MAP data presented in the chapter was secondary data collected from the MODESE website.

This chapter began with an overview of the funding allocation from three budget codes of the American Recovery and Reinvestment Act. This legislation had nine budget allocations categories, but the researcher focused on three, including State Fiscal Stabilization Fund code (1100) for regular instruction, Title I, Part A budget codes (2100) for non-instructional support and (2210) for professional development. Data was included to show how a random sample of 60 school districts across the state of Missouri dispersed these funds among these three codes. Fifty-eight of the 60, or 96%, of the school districts in the study allocated funds to the regular instruction (1100) budget code that allowed for maintaining or hiring additional personnel. In the non-instructional support (2100) budget code under Title I, Part A, 24 of the 60, or 40%, of the districts allocated funds to this

budget code that allowed purchases for reading intervention. Finally, for the (2210) budget code for professional development 34 of the 60, or 56%, of the districts allocated funds to this budget code.

The researcher presented data from the MODESE annual Missouri Assessment Program (MAP) for the area of Communication Arts at the elementary level. Data was summarized for both small and large school districts and displayed by grade level for the 2010 and 2011 school years. The researcher presented data on the percentage of students in each district who scored proficient or advanced on the Communication Arts assessment. This indicated to the researcher that even with additional funds available a little more than half of the students in the districts studied scored at the top levels of the state assessment.

The original study design indicated that the researcher would follow up with school districts to interview about what products were purchased with the allocated funds. The redesigned study did not allow for interviews, so the researcher used data from the Consolidated Performance Report to indicate how many school districts were identified as Title I districts. This filled the data gap for how students in intervention are performing as Title I services were provided to those students not meeting grade level expectations (Wong & Nicotera, 2007). The data indicated that less than 25% of those districts made Adequate Yearly Progress in 2010-2011.

Additionally, the researcher presented regression data to determine if there was a relationship between funds allocated for personnel, intervention and professional development and student achievement as demonstrated on the state assessment. The regression data confirmed that there was no significant relationship between funds allocated from the American Recovery and Reinvestment Act and student achievement as

measured by the Communication Arts scores on the MAP assessment. All of the data presented allowed the researcher to not reject all null hypotheses presented in this research.

In Chapter Five, the researcher will highlight the research questions and hypotheses that guided this study and an overview of the methodology used to complete the study. Limitations and the study design were revisited and significant data and results will be discussed. Connections to current research were made as well as recommendations for future studies. The researcher will present personal reflections related to the content of the study.

Chapter Five: Discussion and Reflection

Introduction

The purpose of this study was to determine if there was a relationship between the stimulus funds allocated to school districts in the state of Missouri through the American Recovery and Reinvestment and student achievement in reading as measured by MAP results in Communication Arts at the elementary level. While one of the main tenets of ARRA was to stabilize education with additional staff and programmatic cutbacks, it also meant to bring about systemic change in school accountability (McDonnell & Weatherford, 2011). This piece of legislation was in a long line of policies aimed at school accountability including *A Nation at Risk*, Individuals with Disabilities Education Act, and No Child Left Behind Act. The ARRA provided school districts with additional funds that were allocated and spent over the course of two fiscal years (USDOE, 2009). There were four assurances that governors were required to accept to receive the additional funding at the state level; including address teacher effectiveness, create longitudinal data systems, implement rigorous standards, and address low performing schools (USDOE, 2009).

The researcher wanted to investigate the potential relationship between student achievement and the amount of ARRA funds districts had available to spend on intervention and professional development. “The change process is about establishing the condition for continuous improvement in order to persist and overcome inevitable barriers to reform” (Fullan, Cuttress, & Kilcher, 2005, p. 55) and involves time and energy from all that are involved in the process. Fully implementing all the initiatives made available from ARRA funding seemed a daunting task. There are many factors that may inhibit full

implementation of any initiative including but not limited to vague or multiple goals, administrative fragmentation, and weak implementation (Wong & Nicotera, 2007).

Review of Methodology and Design

The two research questions that guided this study were, “How have ARRA funds been used in the state of Missouri to fund general improvement of instruction services, non-instruction support services and regular instruction to advance educational reform efforts?” The second question was, “How have ARRA funds been used in the state of Missouri to expand or support the three-tiered model of RtI with the intent to increase student achievement?” The original design of this study was to gather financial data about ARRA funding from a random sample of school districts across the state of Missouri. The researcher created a cover letter that served as consent to participate and emailed to superintendents and chief financial officers. When fewer than 10 school districts returned consent the researcher resent the email since the original research design designated 60 school districts were necessary for the sample data. The second attempt for consent garnered 12 school districts that were willing to participate. The researcher started to make personal calls to school districts in an attempt to gather more data.

After several failed attempts at gathering sufficient data for the sample of the study the researcher was given permission to contact MODESE. The Budget Office in Jefferson City provided the researcher with the ARRA financial data for the 60 school districts in the study sample. Along with the ARRA data the researcher collected Communication Arts MAP scores from the DESE website. This data was collected and analyzed to determine if there was a relationship between the additional ARRA funds provided to school districts to drive reform and student achievement results.

As a result of the changed research design, the original Hypothesis 1 became a Research Question 3. The new question was, “What is the observable relationship between funding through Title I, Part A allocations and student achievement on Communication Arts MAP?”.

Data Analysis and Implications

Research Question 2 and Hypothesis 1 could not be answered after the change in research design became necessary. However, a descriptive examination of the allocation of funds for the two random samples of Missouri school districts indicated some noticeable trends.

Observable trends noted in the data were that 96% of the school districts placed large amounts of ARRA funds in the State Fiscal Stabilization Fund code (1100) for regular instruction. This budget code allowed school districts to retain staff that might have otherwise been cut due to the economic downturn or to hire additional positions. When states agreed to these funds governors had to sign assurances that they would adhere to the guiding principles one of which was to save and create jobs (U.S. Department of Education, 2009). However, it appeared that SFSF funds were being used to “protect the status quo ... these formula dollars had to be used to improve student learning and innovate, not merely fund more of the same” (Smarick, 2010, p. 16).

The researcher found that 40% of the school districts placed ARRA funds in the Title I, Part A budget code (2100) non-instructional support that would have allowed for purchases for interventions. The ARRA funds provided under Title I, Part A were meant to help address districts and schools with “high concentrations of students from families that live in poverty in order to help improve teaching and learning” (U.S. Department of

Education, 2010, p. 10). The third ARRA budget code studied was (2210) for professional development under Title I, Part A, and the researcher found that 56% of the school districts allocated funds to this account. When new initiatives were introduced teachers required professional development so that the initiative would be fully implemented. Weak implementation occurs when not all members of the organization buy-in to the reform changes (Wong & Nicotera, 2007). In addition to the observable trends, the researcher ran multiple regressions to determine if there was a relationship between the ARRA funds allocated and student achievement. After running regressions with MAP scores aggregated by grade level and the three ARRA budget codes the researcher found no significance. Additional regressions were run to control for outlier data and enrollment and still no significance was noted in relationships between the observed variables.

The researcher was unable to follow-up with school districts to determine the products and services that were used for general improvement of instruction or the percentage of students served in Tier II and III interventions of RtI. However, with the collected data from budget code (2100) non-instructional support and additional data from MODESE, the researcher did not reject the null hypothesis: there is no relationship between the percentage of ARRA funds spent on the general improvement of instruction services and the percentage of students entering a RtI model of intervention at Tier II or Tier III as defined by the state of Missouri.

To address Hypothesis 2 and Hypothesis 3, data analysis showed there was no relationship between the amounts of ARRA funds allocated and spent by school districts in the state of Missouri and student achievement results measured by the MAP assessment for Grades 3, 4, and 5. Analysis was applied to a random sample of large districts and a

random sample of small districts for each of the two separate school years examined in the study, for each of the grade levels three through five. Given the data results from the ARRA budget code (2100) and MAP scores, the researcher did not reject the null hypothesis: there is no relationship between student achievement and the percentage of ARRA funds allocated to develop RtI models of intervention as evidenced by achievement measured by MAP assessment scores in Communication Arts. Given the data results from the ARRA budget codes (1100), (2210), and MAP scores, the researcher did not reject the null hypothesis: there is no relationship between student achievement and the percentage of ARRA funds allocated to develop core instructional materials and practice as evidenced by achievement measured by MAP assessment scores in Communication Arts. There were no significant relationships found between allocation of federal funds in budgets codes 1100, 2100, and 2210 and student achievement in reading as measured by Communication Arts MAP.

A Redesign of This Study

The study presented the researcher the opportunity to examine the allocation of funding from a significant piece of legislation and how school districts allocated those funds across several budget categories. If the researcher had the opportunity to complete this study again more time would have been spent working with the MODESE Budget Office to learn about the forms that were used for reporting budget information. The researcher would put together a more comprehensive introduction letter to school district explaining the nature of the study so that school district administrators would have understood more clearly how the data would have been used. Instead of requesting

information only via email, the researcher would have provided opportunities to meet with administrators face to face.

An interesting data component may have come from an opportunity to have conversations with teachers that were implementing new initiatives or using new materials that were purchased with ARRA. Classroom teachers and interventionists would have been able to provide perspective to this study in terms of how the materials were being used and how they were impacting students in reading instruction.

The researcher learned through this study that school district administrators are faced with significant pressures to raise test scores to meet the minimum requirements of No Child Left Behind and state standards. Finding budget information for a graduate study of someone that had no personal relationship with them or their school district did not appear to be a priority.

Personal Reflection and Conclusions

Given that this was not a longitudinal study, it was hard to determine if the funds allocated through the American Recovery and Reinvestment Act would impact educational reform and increase student achievement results on state standardized assessments over time. In the short term, it was clear that the infusion of funds made little to no impact on the improvement of instructional services, professional development for teachers and student achievement. The researcher believed that there would be a relationship between the amount of funds allocated to the (2100) budget code for non-instructional support and the (2210) budget code for professional development and student achievement.

With the original design plan the researcher hoped to find school districts that placed comparative amounts of money in these codes, and then planned to follow-up with

an interview to determine how funds were actually spent and thus, how they were related. The researcher hoped to highlight opportunities school districts used ARRA funding to provide additional intervention supports and matched those purchases with the necessary professional development for teachers to fully implement the interventions.

Instead, the researcher found school districts to be closed-lipped about their expenditures from ARRA. This was puzzling given they had to submit the Final Expenditure Reports to MODESE. The two-year time period for fund expenditures seemed to be a short time to make decisions, which would impact the system on the long-term basis. One of the main tenets of this act was to prevent job loss in the current economic recession (U.S. Department of Education, 2009). While that seemed noble on the surface, the researcher questioned the use of soft money to hire or maintain positions that may not be sustained when the funding was not available. “Many districts in Missouri, for instance, used special education and Title I stimulus aid to hire temporary tutors and strengthen those programs in other ways, Deputy Commissioner of Education Ron Lankford said” (Cavanaugh & Hollingsworth, 2011, para. 28). In the researcher’s experience, teacher’s aids and other tutors were brought in to work one-on-one with students to provide additional support. The students often chosen to work with tutors are the most struggling students in the classroom, yet those tutoring did not have the same expertise as the classroom teacher. Allington (2011) cited several studies about the use of paraprofessionals in working with struggling readers: “However, there [was] substantial evidence that students gain[ed] little academic benefit when paraprofessionals deliver[ed] intervention instruction” (p. 99). Classroom teachers have taken the time to build relationships with their students, and know what they need to progress. “Instruction is

powerful only when it is precise and focused to build directly on what students already know to take them to the next level” (Fullan et al., 2006, p. 33).

Instead of bringing in additional personnel, which was where most school districts placed the largest amounts of the stimulus funds, the researcher believed that a better use of the funds would have been to provide intensive professional development for teachers that were implementing these new initiatives in their classrooms. Educators had to balance many initiatives prior to the American Recovery and Reinvestment Act including, but not limited to RtI, Common Core State Standards, data-driven instruction and assessment and any new programs at the district level. In the researcher’s opinion, it seemed unrealistic that we would expect teachers to embrace even more changes as a result of ARRA and believe that we would get overnight success in terms of student achievement. “Over the past decade, it [had] become a given that any major reform initiative must be accompanied by investments in professional development” (Fullan et al., 2006, p. 22). The data from this study indicated that school districts did not invest funds in the (2210) professional development funding code. Yet the National Staff Development Council (n.d.) stated “For most educators working in schools, professional learning is the singular most accessible means they have to develop the new knowledge, skills, and practices necessary to better meet students' learning needs” (para 3).

Educational accountability legislation such as No Child Left Behind influenced a change in educational standards to increase rigor and the state of Missouri agreed to adopt the common core state standards to guide curriculum writing and instructional practice. On the Common Core State Standards, Brozo (2010) stated “it appear[ed] inevitable that in the coming years they will impact how reading is taught in the elementary grades and

beyond” (p. 147). Not only did educators have to grapple with how to incorporate common core standards in curriculum and practice, more initiatives were brought to educators with the American Recovery and Reinvestment Act. “The standards [were] designed to be robust and relevant to the real world, reflecting the knowledge and skills that our young people need for success in college and careers” (Common Core State Standards Initiative, 2012, para. 1). The researcher questioned whether the two year timeframe for planning and spending ARRA monies provided districts with adequate opportunity to plan effectively for the use of these funds so that they would drive reform beyond the two year time period. In the researcher’s experience, when new initiatives were introduced at the district or school level professional development to support the initiative lacked development or on-going support. “Where traditional professional development lacked a coherent or results-driven purpose and relevant knowledge, effective professional development provides educators with the proper tools to work together to bring about important changes” (Wong & Nicotera, 2007, p. 178).

RtI grew out of the need to change the way students are identified for special education services. As outlined in the Missouri model for the three-tiered intervention system, classroom teachers were to ensure that at least 80% of the students were finding success in the classroom (MODESE, 2013), and only 20% of students should require intervention beyond the general classroom instruction. With RtI, the need for reading specialists may have increased since more students will be served through intervention rather than be identified for special education services via the IQ Discrepancy Model (Fuchs & Fuchs, 2006). The paradigm shift for districts and teachers for identifying students at-risk for failure from IQ to RtI could also be a reason districts chose not to

participate in this study. Districts were still trying to revamp practices and implementation for RtI and also faced making decisions for large amounts of money in a very short time frame with accountability for improvement resting on a high-stakes test.

“Whereas organizational trust and collegiality dominated the educational sector a generation ago, measurable results for all students now becomes the driving force in today’s schools” (Wong & Nicotera, 2007, p. 2). The researcher also believed that school districts were reticent in sharing financial data knowing that it would be tied to achievement on the MAP. Even though state assessment results were available to the general public via the MODESE website, posted in local papers, and used as criteria for district accreditation, pressure associated with showing continual progress on the MAP assessments loomed over educational leaders. MAP scores in this study showed minimal or no progress during the time period that ARRA funds were available to districts for spending on additional personnel, intervention, and professional development.

In order for systemic change to occur there must be a framework for school improvement that involved all stakeholders (Wong & Nicotera, 2007) (Figure 5). This visual display provides a framework for districts to plan for accountability. All schools, but especially low performing schools needed this framework, but also the necessary support to affect systemic change (Wong & Nicotera, 2007). The American Recovery and Reinvestment Act did not take all of the above factors into consideration as money was funneled through the already established funding formulas or Title programs that were in place so that new reforms were not necessary and the funding seemed doomed in creating necessary long-term improvements (Smarick, 2010).

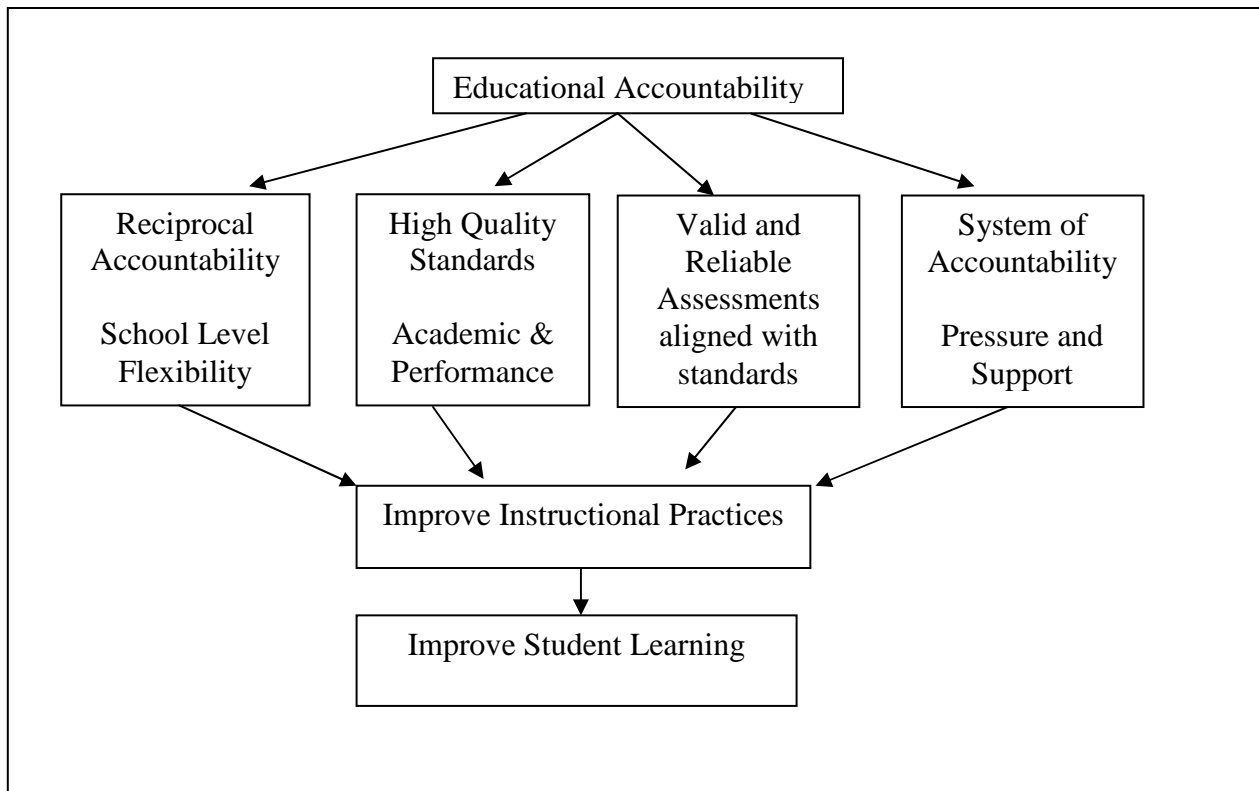


Figure 5. Educational accountability theory of action.

Note. Reprinted from: Wong, K. & Nicotera, A. (2007). *Successful Schools and Educational Accountability* (p. 26). Boston, MA: Allyn and Bacon.

Educational Accountability was the root of The American Recovery and Reinvestment Act and other standard-based pieces of legislation. ARRA afforded districts the hope of true accountability that might increase student learning. It provided flexibility to school districts by allowing them to make decisions of how to disperse and spend stimulus funds as noted in Figure 5 as School Level Flexibility. The state of Missouri agreed to use the Common Core State Standards as high quality standards tied to a rigorous new generation academic and performance assessments aligned to the standards as can be seen in Figure 5 as High Quality Standards and valid and reliable assessments. Educators have pressure and support to raise their level of rigor in terms of engaging curriculum, high quality assessments and data driven instruction. When all of these components are

implemented, instructional practice by high quality teachers will yield improved student learning.

While ARRA was intended to provide support to school districts during a difficult economic period, it also placed undue pressure on decision makers. In the researcher's opinion, the downside to the American Recovery and Reinvestment Act was that it did not outline how instructional practices should be improved so that student learning might increase as seen in Figure 5. This study showed the researcher that providing additional funding to address student achievement through more personnel, support materials and professional development did not significantly impact student achievement in the area of reading.

Next Steps

The United States Department of Education (2012) already published its strategic plan for fiscal years 2011-2014 focused on reaching the President's 2020 goal of having the highest proportion of college graduates in the world. Arne Duncan's message stated that in order for the United States to be back on top with the highest number of college graduates, widespread reform must be implemented from early learning, starting at birth, to post-secondary education (U.S. Department of Education, 2012). This small study, with a narrow focus, has shown that the most recent educational reform, the American Recovery and Reinvestment Act has done little to impact how the students in the state of Missouri performed on state assessments such as the MAP. The researcher believes having an ambitious goal was a great first step, but an effective framework and long-term plan must be in place to ensure the intended outcomes. Increasingly, the state played an integral part in accountability but the focus remained on external accountability and the researcher

believes accountability must be shifted to internal accountability where schools are capacity-building and effective entities (Fullan et al., 2006).

“There was little research on how teachers can be supported over the long term to ensure sustained implementation of new methods and student achievement” (National Reading Panel, 2000, p. 386). The researcher believes that this study shed light on the fact that additional money fell short of a significant impact on the overall student achievement in the area of Communication Arts in the state of Missouri during the school years 2009-2010 and 2010-2011. However, given the complexity of deep learning, understanding and transfer of knowledge, the researcher believes that we cannot reduce the success of our students to the score on a high-stakes assessment. Additional research is needed to determine how teaching and learning are linked to achievement. Educational leaders need to understand how to balance the demands handed down through legislation and build internal capacity to grow and learn at the classroom level. Teachers need to possess a desire and willingness to examine their practice and make adjustments as necessary. “When you don’t know what you don’t know, it is difficult to see what needs to be done” (Fullan et al., 2006, p. 6).

References

- Allington, R. (2010). What I've learned about effective reading instruction from a decade of studying exemplary elementary classroom teachers. In P. Johnston (Ed.), *Rti in literacy—responsive and comprehensive* (pp. 29-41). Newark, DE: International Reading Association.
- Allington, R. (2011). Best practices with struggling readers. In L. Morrow & L. Gambrell (Eds.), *Best practices in literacy instruction* (pp.96-115). New York, NY: Guilford Press.
- Amendum, S. & Fitzgerald, J. (2013). Does structure of content delivery or degree of professional development support matter for student reading growth in high-poverty settings? *Journal of Literacy Research, 45*(4), 465-502.
- Bianco, S. D. (2010). Improving student outcomes: Data-driven instruction and fidelity of implementation in a response to intervention (RTI) model. *TEACHING Exceptional Children Plus, 6*(5), 2-13.
- Bluman, A. (2010). *Elementary statistics a brief version*. New York, NY: McGraw Hill.
- Brozo, W. (2010). The role of content literacy in an effective RtI program. *The Reading teacher, 64*(2), 147-150.
- Bufalino, J., Wang, C., Gomez-Bellenge, F., & Zalud, G. (2010). What's possible for first grade at-risk literacy learners receiving early intervention services. *Literacy Teaching and Learning, 15*(1), 1-15.
- Buffum, A., Mattos, M., & Weber, C. (2010). The why behind RtI. *Educational Leadership, 68*(2), 10-16.
- Carney, K., & Stiefel, G. (2008). Long-term results of a problem-solving approach to

- response to intervention: discussion and implications. *Learning Disabilities: A Contemporary Journal*, 6(2), 61-75.
- Cavanaugh, S. & Hollingsworth, H. (2011). Stimulus end puts a squeeze on education budgets. *Education Week*, 30(27), 32-33.
- Center for Mental Health in Schools. (2011, April). *Implementing response to intervention in context*. Los Angeles, CA: Author at UCLA. Retrieved from <http://smhp.psych.ucla.edu/pdfdocs/implementingrti.pdf>
- Clay, M. (1987). Learning to be learning disabled. *New Zealand Journal of Educational Studies*, 22(2), 155-173.
- Clay, M. (1991). *Becoming literate the construction of inner control*. Portsmouth, NH: Heinemann.
- Clay, M. (1998). *By different paths to common outcomes*. Portland, ME: Stenhouse.
- Clay, M. (1995). *An observation survey of early literacy achievement*. Portsmouth, NH: Heinemann.
- Common Core State Standards Initiative. (2012). In mission statement. Retrieved from <http://www.corestandards.org/>.
- Congress of the United States. (1993). *The federal role in improving elementary and secondary education* (CBO study No.0-16-041768-6). Washington, D.C.: Congressional Budget Office. Retrieved from <http://www.eric.ed.gov.gatekeeper2.lindenwood.edu/contentdelivery/servlet/ERICServlet?accno=ED360087>
- CTB Mc-Graw-Hill. (2007). Missouri assessment program technical report. Retrieved from <http://dese.mo.gov/divimprove/assess/index.html>
- Danielson, L., Doolittle, J., & Bradley, R. (2007). Professional development, capacity

- building, and research needs: Critical issues for response to intervention implementation. *School Psychology Review*, 36(4), 632-637.
- Darling-Hammond, L. (2003). Keeping good teachers: why it matters what leaders can do. *Educational Leadership*, 60(8), 6-13.
- Dee, T., & Jacob, B. (2010). Evaluating NCLB. *Education Next*, 10(3), 54-61.
- Demski, J. (2009). Assess. Instruct. Repeat. *T.H.E. Journal*, 36(5), 30-36.
- Deno, S. (2003). Developments in curriculum-based measurement. *The Journal of Special Education*, 37(3), 184-192.
- Dorn, L., & Henderson, S. (2010). A comprehensive assessment system as a response to intervention process. In P. Johnston (Ed.), *Rti in literacy—responsive and comprehensive* (pp. 133-153). Newark, DE: International Reading Association.
- DuFour, R. (2011). Work together but only if you want to. *Phi Delta Kappan* 92(5), 57-61.
- Duhon, G., Mesmer, E., Atkins, M., Greguson, L., & Olinger, E. (2009). Qualifying intervention intensity: a systematic approach to evaluating student response to increasing intervention frequency. *Journal of Behavioral Education*, 18(2), 101-118.
- Dunn, M. (2010). Response to intervention and reading difficulties: A conceptual model that includes reading recovery. *Learning Disabilities: A Contemporary Journal*, 8(1), 21-40.
- Fountas, I., & Pinnell, G. S. (2001). *Guiding readers and writers: Teaching comprehension, genre, and content literacy*. Portsmouth, NH: Heinemann.
- Fountas, I., & Pinnell, G. S. (2012). Guided reading: The romance and reality. *The Reading Teacher*, (66)4, 268-284.

- Forbes, S., Swenson, B., Person, T., & Reed, J. (2010). Reading recovery: A major component of many RTI models. In P. Johnston (Ed.), *Rti in literacy—responsive and comprehensive* (pp. 171-177). Newark, DE: International Reading Association.
- Fraenkel, J., Wallen, N., & Hyun, H. (2012). *Design and evaluate research in education*. New York, NY: McGraw-Hill.
- Fuchs, D. & Fuchs, L. (2006). Introduction to response to intervention: What, why and how valid is it? *Reading Research Quarterly*, 41(1), 93-99.
- Fullan, M., Cuttress, C., & Kilcher, A. (2005). 8 forces for leaders of change. *Journal of Staff Development*, 26(4), 54-64.
- Fullan, M., Hill, P., & Crevola, C. (2006). *Breakthrough*. Thousand Oaks, CA: Corwin Press.
- Gersten, R., & Dimino, J. (2006). RTI (reponse to intervention): Rethinking special education for students with reading difficulties (yet again). *Reading Research Quarterly*, 41(1), 99-108.
- Gambrell, L., Malloy, J., & Mazzoni, S. (2011). Evidence-based best practices in comprehensive literacy instruction. In L. Morrow & L. Gambrell (Eds.), *Best practices in literacy instruction* (pp.11-36). New York, NY: Guilford Press.
- Green, J. (2008). Collaborating with special education administrators. *Principal*, 88(2), 12-15.
- Guskey, T. (2000). *Evaluating professional development*. Thousand Oaks, CA: Corwin Press.
- Haycock, K. (2001). Closing the achievement gap. *Educational Leadership*, 58(6), 6-11.

- Henley, N., & Furlong, M. (2006). Using curriculum-derived progress monitoring data as part of a response-to-intervention strategy: A case study. *California School Psychologist, 11*, 85-98.
- Hirsh, S. (2012). The impact factor why we can't neglect professional learning evaluation. *Journal of Staff Development, (34)5*, 10-16.
- Hollenbeck, A. (2013). Beyond talking about books: Implications of the reading comprehension instruction and pedagogical beliefs of a special educator perceived as effective. *Learning Disability Quarterly, 36(2)*, 112-125.
- Howard, M. (2009). *Rti from all sides*. Portsmouth, NH: Heinemann.
- Hunt, C., & Handsfield, L. (2013). The emotional landscapes of literacy coaching: Issues of identity, power and positioning. *Journal of Literacy Research, 45(1)*, 47-86.
- International Reading Association. (n.d.). In research and professional development. Retrieved from <http://www.reading.org/general/CurrentResearch.aspx>
- Jenkins, J., Hudson, R., & Johnson, E. (2007). Screening for at-risk readers in a response to intervention framework. *School Psychology Review, 36(4)*, 582-600.
- Jennings, J. (2012). What has President Obama done? *Phi Delta Kappan, 94(2)*, 50-54.
- Johnson, E., & Smith, L. (2008). Implementation of response to intervention at middle school. *TEACHING Exceptional Children, 40(3)*, 46-52.
- Johnston, P. (2010). Introduction. In P. Johnston (Ed.), *Rti in literacy—responsive and comprehensive* (pp. 1-9). Newark, DE: International Reading Association.
- Johnston, P. (2011). Response to intervention in literacy: Problems and possibilities. *The Elementary School Journal, 111(4)*, 511-534.
- Kratochwill, T., Volpiansky, P., Clements, M., & Ball, C. (2007). Professional

development in implementing and sustaining multitier prevention models:

Implications for response to intervention. *School Psychology Review*, 36(4), 618-631.

Lembke, E., Garmon, C., Deno, S., & Stecker, P. (2010). One elementary school's implementation of response to intervention (RtI). *Reading and Writing Quarterly*, 26, 361-373.

Madda, C., Griffo, V., Pearson, P. D., & Rapheal, T. (2011). Balance in comprehensive literacy instruction. In L. Morrow & L. Gambrell (Eds.), *Best practices in literacy instruction* (pp. 37-63). New York, NY: Guilford Press.

Manset-Williamson, G., & Nelson, J. (2005). Balanced, strategic reading instruction for upper-elementary and middle school students with reading disabilities: A comparative study of two approaches. *Learning Disability Quarterly*, 28, 59-73.

Martinez, R., & Young, A. (2011). Response to intervention: How is it practiced and perceived? *International Journal of Special Education*, 26(1), 44-52.

Marzano, R. (2003). *What works in school translating research into action*. Alexandria, VA: Association for Supervision and Curriculum Development.

McDonnell, L., & Weatherford, M. (2011). Crafting an education reform agenda through economic stimulus policy. *Peabody Journal of Education*, 86(3), 304-318.

McLester, S. (2012). Rick and Becky Dufour: Professional learning communities at work. *District Administration*, 48(8), 61-70.

Mead, S., Vaishnav, A., Porter, W., Rotherman, A., & Bellwether, P. (2010). Conflicting missions and unclear results: Lessons for the education stimulus funds. *Bellwether Education Partners*. Retrieved from <http://bellwethereducation.org/ideas/publications/>

- Mellard, D., McKnight, M., & Woods, K. (2009). Response to intervention and progress-monitoring practices in 41 local schools. *Learning Disabilities Research and Practice, 24*(4), 186-195.
- Missouri Department of Elementary and Secondary Education (MODESE). (n.d.). In curriculum frameworks preface. Retrieved from <http://dese.mo.gov/divimprove/curriculum/frameworks/preface.html>
- Missouri Department of Elementary and Secondary Education (MODESE). (2007-2011). District and school information. Retrieved from <http://mcds.dese.mo.gov/quickfacts/Pages/District-and-School-Information.aspx>
- Missouri Department of Elementary and Secondary Education (MODESE). (2011a). Essential components of academic RtI in Missouri. Retrieved from <http://dese.mo.gov/3tieredmodels/rti/documents/rticconceptualframeworkofrtiinmissouri.pdf>
- Missouri Department of Elementary and Secondary Education (MODESE). (2011b). Understanding your adequate yearly progress (AYP). Retrieved from <http://dese.mo.gov/qs/documents/qs-si-understanding-your-ayp.pdf>
- Missouri Department of Elementary and Secondary Education (MODESE). (2012). Highly qualified teacher homepage. Retrieved from http://dese.mo.gov/divimprove/nclb/highly_qualified.htm
- Missouri Department of Elementary and Secondary Education (MODESE). (2013). Missouri professional learning guidelines for student success. Retrieved from http://dese.mo.gov/divteachqual/leadership/pd_guidelines/documents/ProfessionalLearningGuidelinesentiredocument.pdf
- Naik, M., Yorkman, M., & Casserly, M. (2010). *Investing wisely and quickly use of ARRA*

funds in America's great city schools. Washington, DC: Council of the Great City Schools

National Academy of Education. (2009). Standards assessments and accountability [white paper]. Retrieved from <http://www.eric.ed.gov/ERICWebPortal/contentdelivery/servlet/ERICServlet?accno=ED531138>

National Assessment of Educational Progress. (n.d.). In what NAEP does and doesn't report. Retrieved from <http://nces.ed.gov/nationsreportcard/about/#overview>

National Center on Response to Intervention. (n.d.a). In background. Retrieved from <http://www.rti4success.org/aboutus/background>

National Center on Response to Intervention. (n.d.b). In progress monitoring tools. Retrieved from <http://www.rti4success.org/progressMonitoringTools>

National Center on Response to Intervention. (2010). In the what part of the center's definition of RtI. Retrieved from http://www.rti4success.org/sites/default/files/rtiessentialcomponents_042710.pdf

National Governors Association. (2011). Common core standards initiative. Retrieved from <http://www.nga.org/cms/home/special/col2-content/common-core-state-standards-init.html>

National Reading Panel. (n.d.). Teaching children to read: an evidence-based assessment of the scientific research literature on reading and its implications for reading reading instruction. Retrieved from <http://www.nichd.nih.gov/publications/pubs/nrp/documents/report.pdf>

National Staff Development Council. (n.d.). In standards for professional learning. Retrieved from <http://learningforward.org/standards#.UtTFi7Sp2pc>

- Peterson, D., Taylor, B., Burnham, B., & Schock, R. (2009). Reflective coaching conversations: A missing piece. In P. Johnston (Ed.), *Rti in literacy—responsive and comprehensive* (pp. 296-312). Newark, DE: International Reading Association.
- Restori, A. Gresham, F., & Cook, C. (2008). Old habits die hard: Past and current issues pertaining to response to intervention. *California School Psychologist, 13*, 67-78.
- Rinaldi, C., Averill, O., & Stuart, S. (2011). Response to intervention: Educators' perceptions of a three-year RTI collaborative reform effort in an urban elementary school. *Journal of Education, 191*(2), 43-53.
- Sansosti, F., & Noltemeyer, A. (2008). Viewing response-to-intervention through an educational change paradigm: What can we learn? *California School Psychologist, 13*, 55-66.
- Scanlon, D., Gelzheiser, L., Vellutino, F., Schatschneider, C., & Sweeney, J. (2010). Reducing the incidence of early reading difficulties: Professional development for classroom teachers versus direct interventions for children. In P. Johnston (Ed.), *RtI in literacy—responsive and comprehensive* (pp. 259-295). Newark, DE: International Reading Association.
- Scanlon, D., & Sweeney, J. (2010). Response to intervention: An overview: New hope for struggling learners. In P. Johnston (Ed.), *RtI in literacy—responsive and comprehensive* (pp. 13-25). Newark, DE: International Reading Association.
- Schulte, B. (2009, February 27). Re: American Recovery and Reinvestment Act of 2009 (ARRA). Retrieved from <http://dese.mo.gov/divimprove/sia/ARRAmemo.pdf>
- Smarick, A. (2010). Toothless reform? *Education Next, 10* (2), 14-22.
- Stuart, S., & Rinaldi, C. (2009). A collaborative planning framework for teachers

implementing tiered instruction. *TEACHING Exceptional Children*, 42(2), 52-57.

Sweeney, D. (2007). Mirror, mirror, in the lab. *Journal of Staff Development*, 28(1), 38-41.

U.S. Department of Education (USDOE). (n.d.). In improving basic programs operated by local education agencies (title I, part A). Retrieved from <http://www2.ed.gov/programs/titleiparta/index.html>

U.S. Department of Education (USDOE). (1983). A nation at risk. Retrieved from <https://www2.ed.gov/pubs/NatAtRisk/risk.html>

U.S. Department of Education (USDOE). (2004). Standards and assessments peer review guidance: Information and examples for meeting requirements of the No Child Left Behind Act of 2001. Retrieved from http://dese.mo.gov/divimprove/fedprog/grantmgmnt/NCLB_PDF/Standards_assessments_Peer_Review_Guidance_04282004.pdf

U.S. Department of Education (USDOE). (2008). *A nation accountable: Twenty-five years after a nation at risk*. Retrieved from <http://www2.ed.gov/rschstat/research/pubs/risk25.html>

U.S. Department of Education (USDOE), Office of Inspector General. (2009). American Recovery and Reinvestment Act of 2009: Potential consequences of the maintenance of effort requirements under the American Recovery and Reinvestment Act state fiscal stabilization fund. Retrieved from <http://www2.ed.gov/about/offices/list/oig/auditreports/AlertMemorandums/103j0011.pdf>

U.S. Department of Education (USDOE). (2009a). Funds under title I, part A of the

Elementary and Secondary Education Act of 1965 made available under the American Recovery and Reinvestment Act of 2009. Retrieved from http://dese.mo.gov/divimprove/fedprog/financialmanagement/documents/guidance_nov2009.pdf

U.S. Department of Education (USDOE). (2009b). The American Recovery and Reinvestment Act: Saving and creating jobs and reforming education. Retrieved from www2.ed.gov/policy/gen/leg/recovery/presentation/arra.ppt

U.S. Department of Education (USDOE). (2010a). Guidance: Funds under title I, part of Elementary and Secondary Education Act of 1965 made available under the American Recovery and Reinvestment Act of 2009. Retrieved from www2.ed.gov/policy/gen/leg/recovery/guidance/title-i-rev-201003.doc - 2010-03-12

U.S. Department of Education (USDOE). (2010b). Recovery act state fact sheets. Retrieved from <http://www2.ed.gov/policy/gen/leg/recovery/state-fact-sheets/index.html>

U.S. Department of Education (USDOE). (2011). Consolidated state performance report parts one and two. Retrieved from <http://dese.mo.gov/dsm/documents/SY10-11CSPRPartIandII.pdf>

U.S. Department of Education (USDOE). (2012a). School districts' use of recovery act and education jobs fund. Retrieved from <http://www2.ed.gov/about/offices/list/oig/recoveryact.html>

U.S. Department of Education (USDOE), (2012b). Strategic plan for fiscal years 2011-2014. Retrieved from <http://www2.ed.gov/about/reports/strat/plan2011-14/plan-2011.pdf>

- U.S. Department of Health and Human Resources, Public Health Service, National Institutes of Health, National Institute of Child Health and Human Development. (2000). *National reading panel: Teaching children to read*. (NIH Publication No. 00-4754). Retrieved from <https://www.nichd.nih.gov/publications/pubs/nrp/Documents/report.pdf>
- Vanderheyden, A. (2011). Technical adequacy of response to intervention decisions. *Council for Exceptional Children, 77*(3), 335-350.
- Warner, C. (2009). Opportunity and danger: The two sides of the American Recovery and Reinvestment Act. *School Business Affairs, 75*(8), 8-12.
- Waters, J., (2010). Now what? *T.H.E., 37*(2), 26-28.
- What Works Clearinghouse, U.S. Department of Education. (2009). Assisting students struggling with reading response to intervention and multitier interventions at the primary grades. Retrieved from http://ies.ed.gov/ncee/wwc/pdf/practice_guides/rti_reading_pg_021809.pdf#page=1 7
- What Works Clearinghouse, U.S. Department of Education. (2013). Report on Reading Recovery. Retrieved from <http://ies.ed.gov/ncee/wwc/InterventionReport.aspx?sid=420>
- Wong, K. & Nicotera, A. (2007). *Successful schools and educational accountability*. Boston, MA: Allyn & Bacon.
- Ysseldyke, J., Burns, M., Scholin, S., & Parker, D. (2010). Instructionally valid assessment within response to intervention. *TEACHING Exceptional Children, 42*(4), 54-61.

Appendix A

Laura M. Grayson
2819 Kings Crossing
Barnhart, MO 63012
314-520-5045
LMG055@lindenwood.edu

September xx, 2012

Doctor [Name]

Superintendent of Schools

Address

Dear Dr. [Name]:

I am currently an educational doctoral student at Lindenwood University, located in St. Charles, Missouri, conducting an investigation of the American Recovery and Reinvestment Act of 2009. The purpose of this study is to add to the current body of knowledge related to the use of ARRA funds and the establishment of a three-tiered Response to Intervention model and the impact on student achievement in school districts of the state of Missouri.

I will collect information related to the percentage of ARRA funds allocated for core instructional materials and supplemental intervention materials. I will also gather MAP data from the Department of Elementary and Secondary Education's website to analyze achievement results. Once I evaluate data of the 60- school district sample, I will code the results to maintain district confidentiality.

If you are willing to complete the attached survey, I would be appreciative. The link is included at the bottom of this email. Thank you for your time and consideration. Please feel free to contact me at 314-520-5045, or LMG055@lindenwood.edu.

Sincerely,

Laura Grayson

Laura Grayson

cc: Assistant Superintendent of Curriculum
Chief Financial Officer

Appendix B

Possible Follow-up Interview Questions

What specific interventions are in place for Tier II and Tier III?

What additional interventions for Tier II and Tier III were put in place due to ARRA funding?

How were those decisions made to purchase those interventions?

Describe in detail how ARRA funds supported core instruction in your school district.

Describe in detail how ARRA funds were used to expand your existing RtI model.

Vitae

Laura Grayson is from St. Louis, Missouri. She has dedicated her career as a learner and practitioner of education. She graduated with a B.S. in Education from the University of Missouri-St. Louis in 1995. After graduation she took a position as a classroom teacher in the Mehlville School District. Laura honed her craft of elementary education by teaching both primary and intermediate grades. She continued her education and completed her Master of Arts in Education at Lindenwood University in 2000. Laura also holds special education and English Language Learner certificates.

As a passionate learner, Laura was accepted by the Department of Elementary and Secondary Education as a STARR (Select Teachers as Regional Resources) in 2006. This two-year, intensive professional development program was organized to identify master teachers in the state of Missouri to study and implement best practices in authentic learning. Laura collaborated with educators from across the state and national educational researchers to deepen her understanding of instructional practice and to implement those practices in her classroom. The second year of the program afforded her sabbatical from teaching in the classroom to provide professional development to metro school districts.

The STARR program opened the door for Laura to take on the role of Curriculum Director in the Mehlville School District where she was able to use her knowledge to reach out to administrators and classroom teachers. Providing professional development and leading curriculum committees allowed her to further deepen her knowledge of teaching and learning. Laura has presented many local conferences at the National Staff

Development Conference as well as contributed material published in Jan Chappuis's *Seven Strategies for Assessment for Learning* book.

Laura is currently teaching in the Kirkwood School District where she also serves on the school and district level English Language Art Curriculum Committee. Laura is currently participating with the Department of Elementary and Secondary Education on a Best Practices Video Series. The teaching and implementation of Reciprocal Teaching is being videotaped in her classroom to be used for training purposes across the state. She completed her doctorate in Instructional Leadership at Lindenwood University in May of 2014.