UNIVERSITY OF OKLAHOMA

GRADUATE COLLEGE

HOW RURAL OKLAHOMA SUPERINTENDENTS ADDRESS THE SCIENTIFICALLY BASED RESEARCH MANDATE OF NO CHILD LEFT BEHIND

A DISSERTATION

SUBMITTED TO THE GRADUATE FACULTY

in partial fulfillment of the requirements for the

Degree of

DOCTOR OF PHILOSOPHY

By

THOMAS A. DEIGHAN
Norman, Oklahoma
2009

HOW RURAL OKLAHOMA SUPERINTENDENTS ADDRESS THE SCIENTIFICALLY BASED RESEARCH MANDATE OF NO CHILD LEFT BEHIND

A DISSERTATION APPROVED FOR THE
DEPARTMENT OF EDUCATIONAL LEADERSHIP AND POLICY STUDIES

BY

_____
Dr. Mary John O'Hair

_____
Dr. Sara Beach

_____
Dr. Gregg Garn

_____
Dr. Leslie Williams

_____
Dr. Randall Raburn

Acknowledgements

Renee

Hadley

Haley

Love You ALL!

Table of Contents

List of Tables

List of Illustrations

Abstract

This study explores the Scientifically Based Research (SBR) mandate of No Child Left Behind (NCLB) from the perspective of rural Oklahoma school superintendents with the goal of understanding how SBR impacts their practices and their districts. Results indicated that SBR as a mandate has been effectively marginalized due to the political and commercial agendas associated with it and NCLB. The direct impact of SBR on schools has also been minimized by the Oklahoma State Department of Education, which has emerged as an effective intermediary for schools when purchasing SBR products. Although SBR has been marginalized, it is clear that rural Oklahoma Superintendents utilize data and evidence when purchasing educational products for their schools. Termed *Educators' Product Research (EPR),* this practice relies on professional networks, local data/evidence, and E-Research. EPR has become the practical solution to SBR, which relies almost solely on vendor-provided research. SBR has impacted education in as much as educators are more data and evidence driven. SBR, however, does not appear to be driving purchasing in rural Oklahoma schools.

CHAPTER ONE: INTRODUCTION, PURPOSE, AND RATIONALE

Introduction

The No Child Left Behind Act of 2001 requires that educational products and programs purchased with federal education dollars be scientifically research-based (Feuer, Towne, & Shavelson, 2002). Prior to NCLB, scientifically based research (SBR) generally signified that the research met rigorous standards of quality and reliability (Berliner, 2002; Pellegrino & Goldman, 2002), but NCLB narrowed the definition to include only specific types of research methodology. Previous measures for judging an educational intervention's efficacy were marginalized, and the educational community was faced with a new standard of reliability when determining which products, programs, or practices to employ in public schools.

As a result of NCLB, educational research garnered a lot of attention, suddenly becoming a priority for educational administrators, a sales tool for educational vendors, and a challenge for officials in departments of education across the United States (Pellegrino & Goldman, 2002). Immediately following NCLB enactment, educational companies began to promote their products as research-based, presenting volumes of information to support their claims (Popham, 2005), and school administrators were suddenly buried under an avalanche of research with little official oversight. With little or no help from state departments of education or the United States Department of Education, school practitioners were forced to add research evaluation to their list of ever-increasing job duties.

School administrators are not trained research evaluators, and although NCLB has been established as the educational law of the land, few resources have been made available by the federal government to assist educators in evaluating the research-based status of a product. Those resources provided by the federal government, such as The What Works Clearinghouse (WWC), show little evidence of widespread educator, industry, or researcher support (Hass, 2004). After the introduction of the SBR mandate six years ago, little has changed in regard to scientifically based research except that it has become evident that little oversight exists to ensure that schools are investing federal dollars only in products which meet NCLB requirements (Hess, 2005). A "passing-the-buck" situation has emerged in which the United States Department of Education (USDE) placed responsibility for SBR on state departments of education. State departments, lacking resources to meet federal mandates, passed the burden on to school districts.

In the state of Oklahoma, a rural state in which most districts are rural and consist of fewer than 500 students (Oklahoma State Department of Education, 2008), one person ultimately stands accountable for compliance with federal law: the school superintendent. These superintendents traditionally are more directly involved in such compliance issues than their urban or suburban counterparts (Arnold, Newman, Gaddy, & Dean, 2005; De Young, 1995). And research indicates that rural leaders may even be better at implementing many aspects of NLCB such as high-stakes testing regimes and professional development (Beck & Shoffstall, 2005; Smeaton & Waters, 2008). Therefore, it would be fair to assume that these

men and women would be especially well-equipped to meet the SBR mandate in its sixth year of implementation. Unfortunately, little research exists to shed any light on how school leaders meet the SBR mandate or if it is even a widespread concern.

This lack of insight into the practices of school leaders regarding NCLB and scientifically based research is a concern since virtually every dollar of federal funding is tied to this law. Although SBR currently exists without oversight or direct penalties, the potential exists for strict regulation of all educational products, practices, and programs. The void in the research regarding the professional practices of school leaders and SBR invites investigation on several layers. Research is needed into the practices of vendors, educators, and researchers. Recommendations and plans of actions need to be addressed, including investigation into the nature of support needed for practitioners. My first goal is to understand the current practice of those directly responsible for NCLB compliance, those educators forming the front lines of school leadership. In the state of Oklahoma, rural school superintendents consistently serve in that role. The purpose of this dissertation is to investigate how rural Oklahoma superintendents determine if educational products are scientifically research based and how the SBR issue has affected their practice and education as a whole.

Overview of the Dissertation

Chapter One of this dissertation provides the general information necessary to understand the purpose and rationale of the study. Chapter Two provides the historical background and current state of affairs regarding SBR as well as an

overview of the scholarly literature pertaining to this study. Chapter Three describes the research methodology which was utilized when conducting the research, including participant information, and demographic information on their respective districts. Chapter four contains the results of the research. Chapter five contains a discussion of those results and provides implications for future research and practice.

Statement of the Problem

The problem that this research will address is trying to uncover the real-world status of the SBR mandate: how are school leaders coping with the Scientifically Based Research Mandate? With very little warning or industry involvement, the new SBR requirement seemingly caught the educational industry by surprise. Whereas many vendors had made significant strides in promoting the research-based status of their products, many other vendors had no formal research involving their products. Another problem facing vendors was the lack of evidence that their research met the more narrowly defined brand of educational research now regulating their industry as a result of NCLB. This sparked a scramble for compliance, and vendors almost universally began to promote the research-based status of their products. Without any real oversight of the SBR mandate, research standards of vendors began to be questioned (Hess, 2005). Vendors quickly met the demand for research, however.

Vendors met the NCLB demand almost instantly, it seemed, producing volume after volume of research to justify the purchase of their products. Even

experts in reading interventions such as Reid Lyon, a former advisor to President Bush, have expressed frustration with trying to evaluate products based on what the vendors produce: "I always find nothing in there that would help the consumer determine if this stuff really works" (as quoted by Oppenheimer, 2007, p. 1). Certainly, many of these vendors have valid research that meets standards of excellence: a peer-reviewed process, institutional oversight, and professional affiliation. It is equally likely that some vendors employ research-for-hire that may rely on questionable research standards in support of a predetermined goal. Often, such results are published in journals that are not peer-reviewed and that accept payment for publishing the results. Frederick Hess (2005) describes the NCLB accountability systems as "jury-rigged . . . subjected to limited scrutiny" (p.153). In the wake of NCLB, many were wary of the research presented by vendors.

Who Is Monitoring Compliance?

Nevertheless, educators operating under strict timelines and tight budgets make decisions based on the *best* information readily available. Most practitioners do not have the resources or expertise to verify the research backing every product purchased (Achilles, 2003). Federal legislation without effective oversight produced a passing-the-buck situation wherein the burden of compliance fell upon state departments of education who passed responsibility on to schools (Association of Educational Publishers, 2003a). During Title I audits, school leaders must produce the research supporting products and programs which they have purchased for the schools (Edmondson & Shannon, 2003). Again, most school leaders lack training as

research evaluators. To make matters worse, very little involvement of the educational research community was evident in mapping out compliance (St. Pierre, 2002) .

As a result, school leaders may find themselves over-relying on vendors for research documentation. Eventually, a list of approved educational products and programs may be available (Oppenheimer, 2007). In the meantime, schools rely on vendors; state departments of education rely on schools, and the federal government relies on the states. At this point, compliance with SBR and the oversight of billions of educational dollars seems to be unaddressed.

Reading First and Conflicts of Interest

A prime example exists in the recent *Reading First* controversy. Over one billion dollars is devoted to the Reading First Program each year in an effort to improve reading skills in elementary students (Toppo, 2005). Reading First is a federal initiative regulated by NLCB and subject to SBR limitations (Manzano, 2005; Paley, 2007). Reading First officials became the focus of investigation for ignoring SBR guidelines and for being financially tied to textbook companies (Manzano, 2005; Toppo, 2005). According to a press release and accompanying report from Senator Edward Kennedy's office, financial conflicts of interest were discovered which undermined the program and its obligation to employ products supported by SBR (Wagoner, 2007). Officials seemingly ignored the SBR provisions in favor of other interests and financial compensation (Paley, 2007). A lack of oversight and accountability certainly seems to have existed in this case. As

a result of the investigation, recommendations were made to adopt strict conflict of interest regulations which include a provision which would require USDE officials to disclose any financial interests which could represent any possible conflicts of interest (United States Department of Education, 2006). It is not clear that these recommendations were adopted by law or simply enacted internally within the USDE.

School Leaders Left Behind

With such questionable oversight and enforcement, practitioners seem to have no practical avenue to determine if a vendor's research is valid. For most practitioners, an independent process for verifying the review process would seemingly be important (Simpson, 2005). An administrator may purchase multiple programs or products for implementation in a district each year. Verifying the research, personnel, and practices employed in the research of any particular product would be very difficult. Compounding this is the fact that most educators are not researchers; they lack the highly specialized training to evaluate research (Eisenhart & DeHaan, 2005; Oppenheimer, 2007). They may even view the research with disdain after trying previous "researched-based" products or programs (Boardman, Arguelles, Vaughn, Hughes, & Klingner, 2005). Realistically, it is possible that practitioners may be accepting the vendor's claims of having valid research to support a product or service. In its effort to create accountability, NCLB has forced educators to rely upon vendors and their research, be it valid or questionable (Phelps, 2003). Such a situation has emerged in FDA regulations

(Lemmens & Freedman, 2000; The Heller Report, 2002) wherein the ethics of commercial research has been called into question. A situation also seems to exist wherein school leaders are relying on entities whose financial interests could outweigh their interests in schools.

Financial Implications of SBR for Schools

The No Child Left Behind Act of 2001 mandate of *identifying and implementing educational practices supported by rigorous evidence* (United States Department of Education, 2007) did create controversy in American education, not only among researchers and vendors but also among practitioners. Educational products and programs suddenly had to be research-based in order for federal funds to be expended on them. Because relatively few companies had commissioned research on specific educational products and programs, companies were faced with either commissioning research on their products or losing a significant portion of the educational market. Educators, likewise, were reluctant to consider investing precious educational funds in products and programs that were not NCLB compliant. Consequently, this NCLB requirement has become the gold standard for all educational purchases, regardless of funding sources. Because federal funds are allocated through a reimbursement process, schools cannot risk taking a chance on products or programs that are not NCLB certified (Yell, Drasgow, & Lowrey, 2005). The financial ramifications are real for school districts.

Any mistakes could devastate the remaining school budget. Many school districts will not purchase any educational product or program that does meet NCLB

compliance, regardless of experiential knowledge of effectiveness, because several school districts have already been denied funding because of the lack of SBR support (Edmondson & Shannon, 2003). NCLB is very clear in its definition of "scientifically based research." The ramifications for failing to adhere to SBR are real. Research is needed to find out how these school leaders are coping.

Penalties for Non-Compliance with SBR

Many involved in education have feared punitive actions for failure to comply with SBR. Lawyers began making general plans for NCLB litigation very early on (Henry, 2004), and vendors began speculating about the ramifications as well (The Heller Report, 2002). The Association of Educational Publishers addressed the issue early on (Association of Educational Publishers, 2003a) and even in formal meetings with the United States Department of Education (Association of Educational Publishers, 2003b). The Reading First controversy also came early in the NCLB lifetime (Association of Educational Publishers, 2003b; Toppo, 2005; United States Department of Education, 2006) which undoubtedly added to the concern.

The United States Department of Education's stance regarding SBR did little to allay fears of strict enforcement, either. Rod Page, Secretary of Education during NCLB enactment, was committed to strict enforcement of NLCB from the beginning: "No Child Left Behind is now the law of the land. I took an oath to enforce the law, and I intend to do that. I will help states and districts and schools comply—in fact I will do everything in my power to help—but I will not let

deadlines slip or see requirements forgotten" (Manna, 2006, p. 479). It seemed evident from the beginning that strict enforcement of SBR could be expected.

Funding Denied

Nevertheless, as things evolved, it became clear under the Bush administration that the most realistic penalties associated with SBR non-compliance have to do with loss of funding or denial of funding. Such cases have occurred numerous times since NCLB was enacted. Cases of denial of Title I funds have been explored in New York, Pennsylvania, Georgia, and Illinois (Beck & Shoffstall, 2005; Edmondson & Shannon, 2003). This included several rural schools and schools which depended heavily on Title I funding. The reason for many of the denials of funding was directly attributable to the failure to choose research-based interventions. One well-documented case of a rural school's battle with Title I auditors indicated that no clear guidance existed in trying to determine what products or programs complied with SBR (Edmondson & Shannon, 2003). The lack of guidance was and still is a concern shared by schools, researchers, and vendors alike (Association of Educational Publishers, 2003a; Edmondson & Shannon, 2003; Fusarelli, 2007; Oppenheimer, 2007).

Research suggests that fear of funding loss is one of the strategies of governmental policy enactment and NCLB enactment (Ginsberg & Cooper, 2008; Ginsberg & Lyche, 2008; Schoen & Fusarelli, 2008). It seems to have been an effective one, too, keeping sanctions to a minimum. Fear of enforcement has seemingly helped ensure compliance with NCLB mandates *(Ginsberg & Lyche,*

2008; Manna, 2006). And since the Obama Presidency is positioning itself to both support and enforce NCLB (Obama Biden Campaign, 2008a, 2008c), the financial ramifications for non-compliance are too real for schools or vendors to ignore. Too many schools need federal funds in order to operate and cannot afford to ignore SBR guidelines. A case exists to explore the issue of SBR on a scholarly level.

Overview of Research Questions

Although many questions surround SBR, I chose to examine administrators' current practices in determining if products are scientifically research-based. This dissertation investigates the following question: *How do rural Oklahoma school superintendents determine if educational products or programs are supported by scientifically based research?*

Numerous issues and questions arise, however, in light of the research question. The No Child Left Behind Act, financial factors, purchasing habits, professional training, and SBR oversight all related directly to the question and to the possible outcomes of the research. Therefore, the following issues or sub-questions will also be investigated within the framework of the overall research question.

1. *How much participants know about the SBR component of No Child Left Behind.*
2. *How SBR has affected participants' practice and purchasing.*
3. *How participants understand the ties of SBR to funding.*

4. *Which products or programs participants have used which they consider research-based.*
5. *How participants determine that a product is supported by SBR.*
6. *Which resources have been helpful to participants in complying with SBR.*
7. *How research, especially product-related, has impacted participants' practice.*
8. *How training and education has prepared participants to address SBR.*
9. *How well participants understand educational research fundamentals.*
10. *How district policies and/or procedures address SBR.*
11. *Who oversees SBR compliance within the district.*
12. *How SBR compliance is monitored by outside agencies.*
13. *How SBR has impacted student learning.*

Methodology

This was a grounded theory study which relied on qualitative data from one-on-one interviews of practicing rural Oklahoma school superintendents. Additional, publicly available data from the United States Department of Education and the Oklahoma State Department of Education was also obtained in order to gain an accurate understanding of the respective districts' demographics, performance, and faculty characteristics.

Significance and Need for the Study

Considering the increasing role of the federal government in education, it is fair to accept the premise that the SBR mandate may, too, evolve into something more significant. In fact, the scientifically based research mandate opens the door to influence every aspect of public school curriculum. Research into SBR is needed to determine how to best support practitioners' efforts to address this mandate. The first step, however, is to discover how school administrators are currently attempting to comply with the SBR portion of NCLB. This dissertation investigates the implementation of the scientifically based research mandate of No Child Left Behind in rural Oklahoma schools, specifically from the perspective of school superintendents.

The underlying issue of the SBR dilemma is potentially monumental. For the first time, federal legislation has defined the parameters that determine if an educational product, program, or practice is supported by research. Not only does NCLB mandate that federal educational dollars must be spent based on research evidence, it specifically identifies the methodologies which meet that requirement. As previously mentioned, the NCLB definition of educational research created substantial controversy in the educational research community (Eisenhart, 1998, 1999; Eisenhart & Towne, 2003; Erickson & Gutierrez, 2002; Feuer, Towne, & Shavelson, 2002). The controversy did not seem to center around the idea that educators should rely upon products, programs, and practices whose efficacy can be supported by research; instead, the heart of the controversy was the NCLB

definition of SBR – the requirement that grantees only purchase products and programs supported by empirical studies which are experimental or quasi-experimental in nature (Feuer, Towne, Shavelson, 2002). Such an idea has far-reaching implications. Even among supporters, the overall sentiment could be summed up by the following question: "To rejoice or recoil?" (Feuer Towne, Shavelson, 2002, p. 4).

A Void of Research

A variety of issues and concerns have arisen as a result of the SBR mandate since its enactment in 2002. NCLB overwhelmed school leaders and practitioners (Manning, 2005). Educational researchers raised concerns regarding the effect the law would have on their discipline (Pellegrino & Goldman, 2002). Vendors warned of the economic impact of the mandate (Heller, 2002). Practitioners had their say, too, but the SBR dilemma seems to have taken a back seat to the more pressing issues of Adequate Yearly Progress (AYP) and high-stakes testing. Ironically enough, research is lacking regarding the issue of SBR.

The Potential to Change Education

While the focus has been on other NCLB issues, the mandate that all educational products be based on SBR retains the potential to transform education for the next century. The SBR portion of NCLB codifies the standard by which all educational products, programs, and practices are measured. It potentially affects every learning tool at the disposal of educators. Every textbook. Every workbook. Every software title. Every educational approach.

No Child Left Behind certainly changed everything. It ushered in the next step of the evolution of federal involvement in education (McDonnell, 2005; Popham, 2005). Academic control may be shifting to the federal government (Manna, 2006). I sincerely believe that the little understood SBR mandate has been positioned to regulate the educational industry for decades to come. Vendors fear the government approval process. Administrators fear bureaucrats in Washington deciding which reading primer their students can or cannot use. Researchers fear decline in the credibility of their profession (Eisenhart & Towne, 2003; Mayer, 2001). The full ramifications of SBR are yet to be realized.

Lack of Training and Support for Practitioners

School leaders have long felt that their university training falls short of meeting their professional realities. Many superintendents feel that the bulk of their expertise is gained through on-the-job training (Jacobson & Woodworth, 1990; Ruff & Shoho, 2005) and tend to rely on sources of information other than university administrator programs. Research also suggests that school administrators are not trained to address SBR since preparation of doctoral students in SBR is even in doubt (Eisenhart & DeHaan, 2005). Educators simply do not understand the research that they have been charged with evaluating because research has not yet been emphasized in their formal training (Oppenheimer, 2007). Not only do school leaders find themselves left behind by NCLB, they do not seem to have the professional training to address SBR adequately.

Also to be addressed are the issues of support for school leaders, guidance for educators, oversight of SBR standards, and other nuts-and-bolts issues. While NCLB affects many areas of education, SBR was codified but not addressed in any practical manner. The standard was raised without any clear direction for administrators. SBR begs investigation and further research in countless ways. Of immediate concern is the lack of research regarding *how* school administrators determine if products are research-based, or indeed, if school administrators are paying attention to the law at all.

Researcher's Perspectives

My personal experience with SBR has shaped my perspective as a researcher. Early in the life of NCLB, I began to consider the far-reaching implications of the SBR mandate as it relates to education and my own practice as a school administrator. Most of the impetus behind this research has arisen from my own personal experience and perspective as a school administrator also training to become a researcher. This unique perspective as both practitioner and researcher led me to this venue of research. I outline my personal experience at the end of Chapter Three.

CHAPTER TWO: BACKGROUND and review of the literature

Introduction

The No Child Left Behind Act (NCLB) of 2002 (United States Department of Education, 2007) requires that educational products and programs purchased with federal education dollars be supported by scientifically based research (SBR). SBR generally signifies that the research meets rigorous standards of the research community (Berliner, 2002; Pellegrino & Goldman, 2002). When applied to educational practices, products and programs, it signifies that a particular program is supported by empirically-based research which supports the efficacy of that item in an educational setting. Attaching this term to educational products, practices, and programs – along with other aspects of NCLB – signified a major philosophical shift of the federal government in regards to education policy (Superfine, 2005). Not only did NCLB help bring educational research into the public spotlight but it also created a situation wherein the entire educational system could be influenced by research as defined and limited by the federal government.

Background

Although education is traditionally considered a state issue by many, federal involvement in education has steadily grown since the middle of the last century (Hodges, 2006; Jennings, 1999). The GI Bill, established at the end of World War II, marked one of the first strings-attached influx of federal dollars into education (Hodges, 2006; Superfine, 2005). Previous federal involvement had been limited largely to land grants and similar actions, which simply stipulated that schools must

be established using the land and funds allocated (Superfine, 2005). The GI Bill was concerned primarily with the post-secondary education of military veterans, but while the GI Bill funds were ear-marked for higher education, the ramifications began to be realized in K-12 settings as well. This federal foray into higher education eventually trickled down to K-12 education (Jennings, 1999). Socio-economic, racial, and geographic inequalities became evident as college remediation rates began to be examined. Social concerns for the impoverished and disenfranchised were also becoming central to political processes, and educational concerns became issues of equality, resulting in the first official federal entanglement in common education (McDonnell, 2005) – the Elementary and Secondary Education Act of 1964.

The Elementary and Secondary Education Act

As part of his Great Society, Lyndon B. Johnson initiated sweeping initiatives, many of which had direct impact on the nation's children (Kirk, 2005). Efforts were promoted as being centered on improving the lives of the poor and minorities in the United States and logically brought increased scrutiny to education and schools across the country. The Elementary and Secondary Education Act (ESEA) directly or indirectly impacted every school-aged child in the United States as dedicated federal funds were funneled into schools which were socio-economically disadvantaged (Roza, Miller, & Hill, 2005). The funds fell under the Chapter I program, which was eventually restructured into the Title programs operating in the schools today. Through several re-authorizations of ESEA and

growth of Title programs in schools, federal involvement continued to grow steadily into the 21st century (Allmeroth, 2006; Kirk, 2005; McDonnell, 2005; Roza, Miller, & Hill, 2005).

Inequalities Persist

The process of federal involvement into education was seemingly accelerated in the 1980's as renewed interest in educational equality exploded as a result of *A Nation at Risk* (The National Commission on Excellence in Education, 1983) and other reports which revealed gaping disparities in educational conditions, especially in urban schools. *Nation* revealed the drastic funding differences between districts and built a strong case that educational facilities, supplies, and student achievement were directly tied to funding. Race and socio-economic factors were again identified as central issues affecting these areas.

Goals 2000

Goals 2000, passed under the Clinton presidency, was a pre-cursor to the NCLB Act of 2001 (Superfine, 2005) which also sought to instill standards-based education through federal legislation. Goals, in its original form, attempted to increase accountability for public schools, but it was modified only two years after its passage due to waning bi-partisan support. Goals 2000, although never fully implemented, serves as the precursor to NCLB and the next step in federal involvement in education. Within Goals were many of the components eventually included in NCLB.

The Need for No Child Left Behind

The factors that led to NCLB enactment were varied and can be seen as an evolution. Even among critics, NCLB was needed in principle (Erickson & Gutierrez, 2002; Feuer, Towne, & Shavelson, 2002; Lund, 2005; Pellegrino & Goldman, 2002). In the mind of many, justifications for NCLB and for educational reform abound. According to representatives from the USDE, test scores had remained flat from the beginning of ESEA through the year 2000 (Meyer, 2004), so it seems fair to have questioned if Title I was effective. A new approach may have been needed. The Institution for Educational Sciences (IES) Condition of Education 2008 also outlines several indices that show the USA lagging behind our international counterparts in science, math, and reading performance (Planty, Hussar, Snyder, Provasnik, Kena, Dinkes, KewalRamani, & Kemp, 2008). The same report also documents several successes of NCLB, an assertion supported by other studies as well (Mohammed, 2005; Scott, 2005; Sherman, 2008). The educational community has been aware of educational inequities for years (The National Commission on Excellence in Education, 1983) without much evidence of improvement. Evidence suggests that NCLB has improved graduation rates and has identified previously unidentified schools in need of improvement (Planty, Hussar, Snyder, Provasnik, Kena, Dinkes, KewalRamani, & Kemp, 2008). High-stakes testing has been shown to improve academic achievement (Christenson, Decker, Triezenberg, Ysseldyke, & Reschly, 2007), and NCLB has even been credited with spurring school leaders to address poor achievement among subgroups (Sherman,

2008). Many such indicators support the need for federal intervention. Ultimately, the overwhelming congressional support – 381 Representatives and 87 Senators (National Education Association, 2008) – may be one of the best arguments for increasing federal intervention in education. One of those interventions concern this dissertation: the mandate that all educational products, program, and services be supported by Scientifically Based Research.

Scientifically Based Research

The No Child Left Behind Act of 2001 was a bi-partisan effort involving both George W. Bush and Ted Kennedy (Reeves, 2004b). Building on previous federal involvement in education, NCLB tied all federal education dollars to a multitude of standards which included increasing test scores, academic performance, and highly qualified teachers (Allmeroth, 2006; Scott, 2005). The inclusion of SBR, however, denotes a first for federal education law. *Scientifically based research* appears or is referred to over 120 times throughout the act (United States Department of Education, 2007) and mandates that schools should only invest federal education dollars in products, programs, or activities whose efficacy is supported by scientifically based research (Edmondson & Shannon, 2003; Erickson & Gutierrez, 2002; Feuer, Towne, & Shavelson, 2002; Heide, 1996).

> *SCIENTIFICALLY BASED RESEARCH- The term scientifically based research' —(A) means research that involves the application of rigorous, systematic, and objective procedures to obtain reliable and valid knowledge relevant to education activities and programs; and*

(B) includes research that —

(i) employs systematic, empirical methods that draw on observation or experiment;

(ii) involves rigorous data analyses that are adequate to test the stated hypotheses and justify the general conclusions drawn;

(iii) relies on measurements or observational methods that provide reliable and valid data across evaluators and observers, across multiple measurements and observations, and across studies by the same or different investigators;

(iv) is evaluated using experimental or quasi-experimental designs in which individuals, entities, programs, or activities are assigned to different conditions and with appropriate controls to evaluate the effects of the condition of interest, with a preference for random-assignment experiments, or other designs to the extent that those designs contain within-condition or across-condition controls;

(v) ensures that experimental studies are presented in sufficient detail and clarity to allow for replication or, at a minimum, offer the opportunity to build systematically on their findings; and

(vi) has been accepted by a peer-reviewed journal or approved by a panel of independent experts through a comparably rigorous, objective, and scientific review. (United States Department of Education, 2007)

The definition of SBR as outlined in No Child Left Behind was not accepted without controversy. Just the opposite was true because it does not include all disciplines of educational research. In fact, this definition of Scientifically Based Research puts several limitations on what type of research can be included as supporting the effectiveness of a product, program, or practice (Eisenhart & Towne, 2003; Lather, 2006; Popham, 2005). Specifically, the research must be *empirical*, *systematic*, and *reproducible*. The research must be experimental or quasi-experimental. And, the research must have been subject to peer-review or comparable process. Such a definition includes some universally accepted guidelines for educational research (American Educational Research Association, 2006) , but it also imposes some limitations that were not well received by educational researchers.

Reaction of the Educational Research Community

As much controversy surrounded the NCLB definition of SBR due to what it omitted as what it included. Few objections seem to have been raised regarding the NCLB Act's definition of SBR. Even the critics of NCLB have weighed in positively regarding this aspect of the act, "There is much with which we agree" (Erickson, 2002, p 21). The premise that educational practice should be supported with research seems to have been accepted in and of itself. The disagreement centered around the exclusivity of the federal definition of Scientifically Based Research because it only recognizes certain types of research.

Multiple Educational Research Methodologies

Educational research tends to fall into two separate disciplines – quantitative research and qualitative research – or into a category called *mixed methods* which utilizes components of both categories. The differences between the two types of research can be explained by the types of data analyzed. Quantitative data generally comes in the form of measurable, numerical data such as test scores and statistics. As such, quantitative data is generally reproducible, at least in the same form, and is considered less susceptible to researcher bias.

Qualitative data is less definable, since it is gleaned through interviews and observations which may or may not be measurable in a traditional sense. The data can be more subject to researcher interpretation than quantitative data, so methodology is a very important part of the process (N. K. Denzin, Lincoln, & Giardina, 2006; Glaser & Strauss, 1967b; Merriam, 1998). Dozens of qualitative methodologies exist which are designed to protect the integrity of the process and to help ensure that the research could be reproduced if so desired.

Different Views of Research

Approaching the differences in educational research methodologies is not merely as simple as labeling it a quantitative versus qualitative problem or numerical data versus human data. Rather the source of the controversy lies in a difference in philosophical approaches (Pierre, 2006). Generally speaking, quantitative research is considered positivistic (more objective), and qualitative research is considered anti-positivistic (more subjective) (Lund, 2005). Quantitative

research is related to a naturalistic view. Qualitative research is related to social view. The distinctions and arguments could go on and on without remedy, because as St. Pierre (2006) states,"it is often the case that those who work within one theoretical framework find others unintelligible" (p. 25). With that in mind, the controversy lies in how researchers view empirical evidence. While the data from an experimental study may meet the threshold of empirical evidence for a quantitative researcher, a qualitative researcher may see the data as simply raising more questions. Eisenhart (2005) defines it as "intentionality" (p. 5). Lund (2005) diplomatically argues that both approaches are epistemologically similar, "While the methods for collecting and analyzing data and the data themselves are different, the two approaches should be considered grounded on the same philosophical assumption, namely critical realism" (pp. 130-131). Despite such diplomacy, it is clear that this philosophical conflict may not be resolved any time soon.

Why Educational Research is Different

Philosophical debates aside, it is clear that educational research is not a controllable, predictable, and replicable laboratory science. Berliner (2002) describes the complexities facing educational research:

> *Doing science and implementing scientific findings are so difficult in education because humans in schools are embedded in complex and changing networks of social interaction. The participants in those networks have variable power to affect each other from day to day, and the ordinary events of life (a sick child, a messy divorce, a passionate love affair,*

> *migraine headaches, hot flashes, a birthday party, alcohol abuse, a new principal, a new child in the classroom, rain that keeps the children from a recess outside the school building) all affect doing science in school settings by limiting the generalizeability of educational research findings. Compared to designing bridges and circuits or splitting either atoms or genes, the science to help change schools and classrooms is harder to do because context cannot be controlled (p. 19)*

These sorts of contextual challenges limit researchers' abilities to employ true experimental designs. The ethical considerations of research involving children, the inability to control the environment, and the sheer number of human factors all make educational settings hard to study (Hostetler, 2005). Attempting to research in a context "composed of multiple and overlapping communities of practice" (Preissle, 2006) p. 692) complicates research challenges immeasurably. It is almost impossible to do truly randomized studies in education (Whitcomb & Borko, 2007), because these layers often compete or conflict with each other, making educational research much less bounded than other areas of research. Critics also assert that SBR ignores established teaching practices (Protheroe, 2004) in favor of researching products and programs. Even the very language used to describe educational matters is debatable (Hostetler, 2005). Educational research is truly an area of research in which all forms of data can be valuable and in which a multitude of methodologies are needed.

Costs of SBR Model

Another difficulty in employing the SBR model for research as outlined by NCLB is the sheer financial costs of performing an experimental or quasi-experimental study. The What Works Clearinghouse outlines a minimum study period of 12 Weeks (Slavin, 2002) in order to consider a study as sufficient. Researchers operating under a grant at Johns Hopkins University incurred $70,000 in program expenses just to perform one randomized study in a public school (Slavin, 2002). Had the research been commissioned by an educational vendor instead of being conducted under a grant, the costs would have been prohibitive for all but the largest of educational companies. As a result of the prohibitive costs, many of the randomized studies in education are of very short duration (Slavin, 2002) and do not meet the WWC requirements. In the end, someone must pay the costs for research which meets governmental guidelines – the government, the vendor, or the schools. Researchers have suggested other approaches to research which have been described as evidence based (Chatterji, 2005; Slavin, 2002, 2008). These methods employ multiple forms of data and varying methodologies and are purported to cost less (Slavin, 2002, 2008). At this point, however, the standards have not changed, and this research must be concerned with current SBR issues.

The No Child Left Behind Act of 2001's discussion of research limits federally accepted research to experimental or quasi-experimental quantitative research. However, the legislation does not negate qualitative research; instead, it simply limits SBR to research that is quantitative and experimental/quasi-

experimental. Qualitative research is not addressed in relation to the issue of scientifically based research; as far as No Child Left Behind is concerned, the only educational research of value is quantitative research of experimental design.

Unfortunately, a large body of educational research is qualitative by design, a fact which was not lost on the educational research community. Based on the controversy which surfaced subsequent to NCLB enactment, one could argue that the entire educational research community was under attack, not just the qualitative branch. Title after title appeared in scholarly journals as the debate over NCLB raged: *Be Careful What You Wish For: You May Get It: Educational Research in the Spotlight (Pellegrino & Goldman, 2002); Educational Research: The Hardest Research of All (Berliner, 2002);* and *Contestation and Change in National Policy on "Scientifically Based" Education Research (Eisenhart & Towne, 2003).*

Qualitative Research and SBR

Critics argue that qualitative research is more difficult, requires more time to properly conduct, and is an essential piece of the puzzle in determining if something is truly scientifically research-based (Erickson & Gutierrez, 2002). Berliner argues that research in education is too complex to disregard qualitative research:

> *We have conquered enormous complexity. But if we accept that we have unique complexities to deal with, then the orthodox view of science now being put forward by the government is a limited and faulty one. Our science forces us to deal with particular problems, where local knowledge is needed. Therefore, ethnographic research is crucial, as are case studies, survey*

research, time series, design experiments, action research, and other means to collect reliable evidence for engaging in unfettered argument about education issues. A single method is not what the government should be promoting for educational researchers (Berliner, 2002, p. 20).

Educational Research: More than Numbers

The assertion by many is that educational research is different than other research disciplines. One element that increases this difficulty is that educational researchers frequently deal with minor children. Another is the vague nature of educational research, that educational research requires more critical thought than other areas of research in order to truly arrive at solid conclusions (Berliner, 2002). Finally, the sheer complexity of the educational process creates further challenges. The almost endless mix of people, settings, and uncontrollable variables is simply not something that can always be represented through experimental methods.

Further fueling the fire is that one draft of the original NLCB Act proposal addressed qualitative research. According to Eisenhart (2003), the following language supporting qualitative research as scientific was omitted before the act was submitted for legislation:

SCIENTIFICALLY BASED QUALITATIVE RESEARCH STANDARDS.-The term "scientifically based qualitative research standards-

(A) means the systematic collection and analysis of data often associated with traditions of inquiry historically based in the humanities, such as narrative analysis; and

(B) includes research that-

(i) uses some combination of participant observation, in-depth interviewing and document collection;

(ii) is intended to explore issues and hypotheses whose underlying dynamics and factors are not sufficiently well refined, understood, or amenable to experimental control to permit adequate study through quantitative research;

(iii) may include case studies, ethnographies, life histories, multi-site case studies, and participatory action research; and

(iv) uses approaches to assess the experimental knowledge acquired to assure that the findings are scientifically valid and replicable (p. 33).

The exclusion of qualitative research from the NCLB Act is precisely the contention of many educational researchers. The value of qualitative research in the field of education cannot be discounted simply because it can best address the complexity and limitations of educational settings; hence, qualitative researchers do not seem willing to give up at this point. Researchers seem to be gearing up for a fight on the issue, calling for "the launching of a spirited defense of qualitative research" (Wright, 2006).

Regardless of the intent of the law or the intensity of the debate, the fact remains that NCLB is law and schools must deal with it in its present form. No evidence indicates that the inclusion of SBR is being re-thought, but many

researchers would, apparently, like to see the SBR provisions modified to include a broader definition of SBR, especially one which includes qualitative research.

The Gap in the Literature

Although a significant amount of literature exists in policy implementation, NCLB, and even SBR, little research seems to have been conducted into the practices of school leaders in regard to SBR. Enough theory exists, however, to guide this and future research in understanding this phenomenon. The following literature review is not intended to represent an exhaustive treatment of the subjects outlined. Instead, it is designed to provide the necessary insight to responsibly consider the subsequent research findings.

Effects on Practitioners

Although a descriptive case study may be conducted atheoretically (Creswell, 1998; Merriam, 1998), a basic understand of existing literature and established theory is necessary to grasp the significance of any potential data. Just as the background description of the SBR dilemma provides context, exploration of relevant theory provides insight into the issues which affect practitioners as they address SBR and NCLB. Several areas of research are discussed, including research into SBR, Policy Implementation Theory, Social Networking Perspective, and research into rural schools.

Practitioners and Scientifically Based Research

St. Pierre (2008) asserts that the SBR mandate is an effort to control educational research, one of the latest protests from researchers regarding the

controversial law. Feedback from practitioners, however, has been lacking in the issue since relatively little scholarly investigation into how SBR affects school leaders has been performed. What is clear, however, is that many superintendents and other school leaders seem to view NCLB negatively, or at a minimum, with suspicion (Sherman, 2008). The law is often seen as unfeasible and overwhelming (Blankenship, 2007). Such attitudes seem to prevail among many school leaders, even though NCLB implementation has occurred successfully in many instances. Nevertheless, the potential penalties associated with non-compliance have persuaded superintendents to remain fearful of the legislation's hidden agenda (Mathis, 2004; Ryan, 2007). Evidence does indicate that NCLB has positively impacted student achievement in many cases, but the key to this success lies mainly with the local school administration (Bingenheimer-Rendahl, 2006; Cooper, Fusarelli, & Randall, 2004). It seems apparent that implementation of the various provisions of the No Child Left Behind Act depends on school leadership at the local level. The same can be said of the SBR provision as well.

Scientifically Based Research may appear as simply another provision of NCLB when viewed alongside the more accentuated provisions such as *highly qualified teachers*, and *adequate yearly progress*. This mandate, however, may hold the greatest potential for impacting educational practices, simply due to the financial ramifications. Research does suggest that superintendents are using evidence-based strategies more and more often (Honig & Coburn, 2008), but it is not always clear how research is used in the decision-making processes (Hess, 2008). Ironically

enough, there is a basic lack of evidence to support the assertion that use of SBR supported products and programs actually impacts student achievement (Dickson, 2006). Nevertheless, in a USDE document planning for the future of NCLB, it is clear that SBR is the backbone of efforts to improve instructional effectiveness and student achievement (Spellings, 2007). With that in mind, it seems clear that SBR shows no signs of disappearing soon, especially in light of the 2008 Presidential elections.

The Future of SBR under President Obama

Although labeled a Bush bill, NCLB is clearly a bi-partisan effort (National Education Association, 2008; Reeves, 2004a, 2006) that resulted from Democratic and Republican support. And while Bush has carried the flag of NCLB for almost 6 years, his presidency is about to end. NCLB will be passed to the Barack Obama administration. The question of how President Obama views NCLB and SBR holds serious implications for this dissertation. Considering that the Obama presidency will be in its infancy upon the completion of this dissertation, it is important to look at Obama's statements and the statements issued during his recent campaign regarding SBR and NCLB.

First and foremost, President Obama has indicated that NCLB is here to stay, but he has agreed to change one aspect of the law: funding. *"Barack Obama and Joe Biden believe that the overall goal of the No Child Left Behind Act (NCLB) is the right one – ensuring that all children can meet high standards – but the law has significant flaws that need to be addressed. They believe it was wrong to force*

teachers, principals and schools to accomplish the goals of No Child Left Behind without the necessary resources"(Obama Biden Campaign, 2008a).

Obama also commits to "Restore scientific integrity in government decision making" (Obama Biden Campaign, 2008b). In this statement he also references educational research, enforcement of research standards, and a non-political approach to research. He has also "proposes an increase to federal spending on education research and development, calling it an immature field. ,"(Software and Information Industry Association, 2008). He also indicated an interest in expanding the current narrow definition of research. The following statement indicates a strong commitment to SBR:

Barack Obama and Joe Biden will double our investment in educational R&D by the end of their first term. Part of this investment will be devoted to commissioning a blue-ribbon private sector panel of premiere business leaders, educators, researchers, and others to make recommendations to the Secretary of Education on successful programs and innovations across the country that should be scaled. (Obama Biden Campaign, 2008c).

It is clear from the quotes above and from other supporting statements that an Obama Presidency does not mean the end of NCLB. Instead, it seems clear that Obama is committed to the intent of NCLB and especially committed to the principles of scientific inquiry, even offering hope of increased funding and a reevaluation of the current constraints of SBR(Obama Biden Campaign, 2008b) . It would be nothing less than speculation on my part to predict anything based on

these statements, but it seems clear that an Obama Presidency is committed to both SBR and NCLB. The Secretary of Education has supported Obama's statements as well.

Secretary of Education Arne Duncan

Newly appointed Secretary of Education, Arne Duncan, is a long-time political and personal associate of President Barack Obama who formed a relationship with him during Duncan's term as CEO of Chicago Public Schools (Cook, 2009; NTSA, 2009). Duncan followed former CEO Vallas who had overseen a period of reform in the nation's third largest city which resulted in rising test scores until Vallas' last year at the helm (Hess, Litow, & Elmore, 2002). The reaction to Duncan's appointment has been mixed, but mostly positive. Known for being tough on poorly performing schools and replacing them with charter schools, Duncan still managed to receive endorsements from several educational organizations, including the National Education Association (Cook, 2009).

Regarding SBR, Duncan has neither confirmed nor refuted Obama's previous commitments, but he has weighed in on NCLB itself. Just as Obama did, Duncan has committed to increase funding and to adjust the law for flexibility. And despite conjecture that NCLB may be in jeopardy, neither he nor the President have indicated any intent to repeal the law. Instead, Duncan has outlined a more thoughtful approach before re-authorization:

> *Now we move into the implementation stage. And again, we want to implement this impeccably. As we go forward, I want to get out, travel the*

> *country, listen and learn. There are parts of NCLB that work very well, there are parts that we want to improve on. And we're just going to have a really simple strategy. What worked, we want to build upon, what didn't work, we're going to fix it. But there's lots of smart folks out there, and I want to get out and travel the country, listen to students, listen to parents, listen to teachers, listen to principals. And we'll come back later in the year with reauthorization. (MSNBC, 2009)*

Clearly, Duncan is not totally satisfied with NCLB and plans, at a minimum, to re-think the law before attempting reauthorization – a position which seems to fall in line with President Obama who sees Duncan as someone who will do what it takes, ""When faced with tough decisions, Arne doesn't blink. He's not beholden to any one ideology—and he doesn't hesitate for one minute to do what needs to be done . . . He's championed good charter schools—even when it was controversial. He's shut down failing schools and replaced their entire staffs—even when it was unpopular" (Cook, 2009). The nature of NCLB funding, implementation, and enforcement under the new administration should become evident over time. Political considerations, however, are not the only issues surrounding NCLB. Fortunately, a considerable body of research offers insight into how such policies are implemented.

Policy Implementation Research

Policy implementation research is extensive and varied, but again, little research has specifically targeted implementation of the SBR component of NCLB.

Certain principles of policy implementation theory are vital to understanding the monumental challenge to successfully implementing a nationwide, comprehensive reform effort such as the No Child Left Behind Act.

According to Fowler (2008), policy implementation theory has evolved through three essential stages. In the early days, policy implementation theory research concentrated on examining the inherent difficulties of successfully implementing policy changes and on cultural barriers to change (McLaughlin, 1987). Such studies often indicated that policy implementers "devise policies as if they will be implemented in a vacuum" (p. 272) and that the implementers simply do not have the necessary skills to achieve successful implementation. One such study by Gross (1971) discovered that such efforts often fail because participants do not ever fully understand the process, that resources are lacking, and that implementers ultimately give up entirely on the policy (as cited by Fowler, 2008, p.273).

The next trend of policy implementation research examined both sides of the coin: policy implementation successes and policy implementation failures (McLaughlin, 1987). Huberman and Miles (1984) developed a continuum which spanned the distance between "highly successful implementations" and "unsuccessful implementations" (as cited by Fowler, p. 276). In most cases, success seems to rise and fall on the school leaders' level of commitment to the policy changes. Of course, factors such as adequate supplies, proper training, and teacher

commitment are also paramount, but those issues are largely dependent on school leadership's role in encouraging or discouraging the policy changes.

The latest generation of policy implementation has evolved into more nuts-and-bolts approaches. While the first generation of research concentrated on the *what* and second-generation research concentrated on the *why,* the latest phase of research seems to be examining the *how*. Since the early 1990's, researchers have been largely devoted to discovering "How can teachers and administrators learn to implement programs that require a major change in their professional practice?" and "How can a successful reform be expanded from a few sites to many?" (Fowler, 2008, p. 278). Earlier research often dealt with the dilemma of instituting relatively simple reforms in endlessly complex systems. The difficulty of examining the *how* increases exponentially when considering a comprehensive reform effort such as NCLB. Such is the nature of modern educational policy research.

Policy Implementation = People Implementation

One factor contributing to the complexity of policy implementation of SBR and similar efforts is the multitude of invested stakeholders in schools. Virtually everyone can stake a property claim to schools, from childless taxpayers to the professional educator. SBR further adds to this complexity when one considers the stake of vendors, researchers, and government officials. The issue of SBR affects every child and parent in the United States in some measure as well. Understanding what roles are at play in policy implementation is vital grasping the implications of the SBR (Sabatier, 1999). Sabatier (1999) indicates that hundreds of participants

may be involved. Virtually all policy implementation research identifies this human factor as the major battle in policy implementation. From reticent teachers and principals (Fowler, 2008), to inexperienced bureaucrats (Mohammed, 2005), to manipulative vendors (Hess, 2005) – everyone stakes a claim, with the potential to make or break a policy.

School-Level Issues

A general overview of policy implementation research was included in this dissertation to illustrate that research into the area is extensive, but an understanding of policy implementation on a practitioner level is central to this study. As earlier discussion revealed, school leaders are often the critical element in determining the level of success of any policy change. Insight into how they affect that change is important to understanding the potential mechanics of SBR implementation as well. Volumes of research have confirmed that the local leaders are key – if not the most important – players in the policy implementation process at a local level (Fowler, 2008; Jez, 1999; Leithwood & Anderson, 1988; Leithwood & Riehl, 2003; Leithwood, Steinbach, & Raun, 1993; Mohammed, 2005; Sipple, Killeen, & Monk, 2004; Spillane, Diamond, Burch, Hallet, Jita, & Zoltners, 2002; Spillane, Reiser, & Reimer, 2002). An overview of policy implementation theory is necessary before looking into the school leader's role in school change. Fowler (2008) identifies four major frameworks of policy implementation theory: The Competing Values Perspective, The Policy Types Perspective, The Institutional Choice Perspective, and The International Convergence Perspective.

Competing Values Framework (Iannacccone, 1988) is an approach to policy analysis through the perspective that educational priorities are cyclical and limited to only a few priorities at any given time. Realignment occurs every forty years or so as these values shift; the result is that once a value is the priority, it maintains dominance for a long period (As cited by Fowler, p. 334).

Policy Types Framework (Lowi 1964; Lowi & Ginsberg, 1994) classifies policies as distributive, regulatory, and redistributive (as cited by Fowler, page 335). Similar to the Competing Values theories, theory domination is tied to historical cycles. Within this framework, the key to understanding policy shifts is examined in light of historical trends.

Institutional Choice Framework (as cited by Fowler on page 335, Kirp, 1982) views policies on national levels based upon a nation's predominant institutional organization: bureaucracy, legalization, professionalization, politics, and the market. Similar to the preceding two theories, only one or two institutional types dominate at a time in some measure of mixture.

International Convergence Theory is based on studies in comparative education and the concept that school systems worldwide are gradually becoming more and more similar or that is, converging (Coombs, 1984; Wirt and Harman; 1986; Davies and Guppy, 1997; as quoted by Fowler, 2008, p. 336). Educational policy borrowing, a field of research closely related to educational policy research, supports that sharing has occurred on many levels and between many countries (Ball, 1998).

The preceding list by no means is intended to serve as a comprehensive study of policy implementation. Rather, it serves as a generalized understanding to frame the complexity of research into schools, leadership, and policy implementation. Many theories fall under the discipline, including Rational Choice Theory (Spillane, Diamond, Burch, Hallet, Jita, & Zoltners, 2002; Spillane, Reiser, & Reimer, 2002), which asserts that changes can be affected through incentives and/or censure. Ryan (2007, p. 27) cites four major theoretical bases: *Brewer's Stages Hueristic, Van Meter and Van Horn's Change and Consensus, Berman's Micro- and Macro-Implementation, and Sabatier's Advocacy Coalition Framework.* These four theories could also fit into Fowler's categorizations and vice-versa. Such theories deal with policy implementation on many different levels. I have chosen, however, to concentrate on the school superintendent's experience with SBR, how SBR affects rural superintendents as a group. Understanding policy implementation theory is helpful, but a keener look into school leaders' practices is needed to understand the SBR dilemma.

Practitioners Rely on Each Other

The preceding research seems to address policy implementation on a much broader scale than needed for this study which is investigating just how local school leaders cope with policy implementation. And much of the research into educational leadership has come to similar conclusions on the processes by which school leaders implement policy. Spillane (2002a) describes how leaders often rely on informal and formal networks when faced with policy implementation challenges. These

networks include professional relationships and peer interaction. They also include "the vast non-system of textbook publishers, professional development providers, educational consultants, and the like" (Spillane, 2002a, p. 409). Intermediary organizations and professional organizations also serve as resources and aide to school leaders seeking strategies for implementing policies (Honig, 2004).

Based on these studies, it can be argued that practitioners rely on professional relationships more than other avenues when in need of advice, resources, or ideas. Professional networks and coalitions seem to play a major part in practitioners' sense-making processes. One study even indicates that seventy percent of superintendents prefer "external and personal" (Wills, 1992) sources of support over sources such as databases, a sentiment reflected in business leadership research as well (Cheuk, 2007). For the practitioner, coalitions do seem to play a major role in policy implementation. Since school leaders seem to rely on their own networks for trusted information more than they rely upon universities, government agencies, or even researchers, it seems that these relationships lie at the heart of how superintendents get things done. It may even be how they have addressed the SBR mandate.

Social Network Perspective

Social Network Perspective (SNP) seems to have been utilized rarely by educational researchers to explore issues, even though a large body of educational research supports the assertion that social networks are important in school leaders' decision-making processes (Song & Miskel, 2005, 2007). Social Network

Perspective theory has been relied on by researchers in business, management, organizational studies, and sociology for years(Gubbins & MacCurtain, 2008; Hatala, 2006; Laumann & Knoke, 1987; Reid, Smith, & Michael, 2008; Smångs, 2006; Wasserman & Faust, 1994) , but it poses valuable possibilities for educational research as well. According to Wasserman and Faust (1994), SNP is defined by five core principles:

1. Social network perspective focuses on the relationships among social units.
2. Actors and their actions are viewed as interdependent rather than independent and autonomous.
3. The relationships among actors are channels for the transmission of either material or nonmaterial resources.
4. The network structural environment affects individual behavior by providing opportunities for or imposing constraints on individual actions.
5. The structure of the network is composed of lasting patterns of relations among actors. (as cited by Song & Miskel, 2005, p. 13).

One way to look at SNP is with the idea that policy implementers do not act alone, but rather that they act within the constraints of their existing social networks (Laumann & Knoke, 1987). Even among relatively isolated professionals who operate within smaller networks, the principles are the same since even the largest networks center around a small core of individuals (Song & Miskel, 2005). Such

networks are important in almost all professions and are seen in as formal or informal networks which may include professional organizations, government entities, family, friends, and other interests (Reid, Smith, & Michael, 2008). Social Network Perspective research explores all facets of these social networks in great detail. For this study, however, I am primarily interested in the exchange of information that may or may not occur as rural superintendents cope with SBR compliance. Smångs (2006) describes this interdependence as follows:

> *The business group is to be understood in terms of a communal system of exchange based upon the logic or norm of reciprocity. Hence, business groups are communal systems of exchange in the form of organizational networks congealed, and maintained over time, by the social mechanism of reciprocity. Through continued interaction in the form of reciprocity, the networks of firms eventually congeal and are transformed into economic institutions or, expressed differently, business groups are driven and integrated by continued acts of reciprocity (pp. 898-899).*

The social network, in this case a *business group,* is based upon a reciprocal relationship wherein members benefit mutually from professional relationships. The commodities exchanged vary across disciplines, but the motive and nature of exchanges are the same:

> *By the systematic exchange and transfer of different kinds of favours (sic) and obligations between actors, including resource transfers and information transmissions. Business groups are therefore properly*

> *conceived of as ownership networks as well as information and exchange networks (Smångs, 2006, p. 897).*

Accordingly, four commodities are exchanged in these networks: *Favors, Obligations, Resources,* and *Information.* Such networks exist within almost every profession, but the question of how it relates to rural school superintendents remains.

Social Network Perspective and Education

Song (2007) expresses discouragement that very little educational research has employed SNP because the opportunities for application in educational policy are extensive and the field could benefit greatly from an SNP approach. Research suggests that social network dynamics are similar across professions and disciplines (Gubbins & MacCurtain, 2008; Hatala, 2006; Laumann & Knoke, 1987; Reid, Smith, & Michael, 2008; Smångs, 2006; Wasserman & Faust, 1994), especially in sociologically-related fields. Hence, the principles evident elsewhere have been applied in education and educational leadership research successfully (Gubbins & MacCurtain, 2008; Song & Miskel, 2005, 2007). Considering the multitude of possible social alliances and inter-relationships encountered by school leaders, it seems fair to assume that tenants of SNP will become evident in the practices of rural Oklahoma superintendents.

Trusted Information and Resources

Aside from the obvious reciprocal benefits of social networks, it is clear that professionals also value the trustworthiness of information and resources (Gubbins

& MacCurtain, 2008). School leaders have been known to be suspicious of even the most thoroughly vetted information (Melnick & Henk, 2006). It would stand to reason, therefore, that *trust* would be of paramount interest to rural school superintendents as well, since they traditionally bear a greater burden of responsibility than their non-rural counterparts (Decker & Talbot, 1991; Jacobson & Woodworth, 1990). Isolation, policy pressures, political stresses, and other unique factors of their profession would seemingly drive them to the support of their social networks. *Trust* would seem to be a valuable trait within their network.

The reasons for professionals being able to trust in and to rely upon each other within those social networks are clear. Shared professional goals, shared stresses, shared interests, and shared needs all characterize factors within these networks (Gubbins & MacCurtain, 2008; Laumann & Knoke, 1987; Reid, Smith, & Michael, 2008; Smångs, 2006; Song & Miskel, 2005, 2007; Wasserman & Faust, 1994). Rural superintendents, if anyone, would seem to benefit from such relationships as they face the management of their districts. That need for reliable information seems especially acute in the case of SBR. It seems likely that school leaders are utilizing social networks when addressing the issue.

An excerpt quote from Leithwood, Steinbach, and Ruan's 1993 study on superintendents' decision-making truly sums up the importance of social connections and decision-making for superintendents:

> *As educational administrators become more "expert," more experienced in their roles and as they move to more senior positions, they rely more*

> *extensively on solving their problems in collaboration with groups of colleagues rather than by themselves (365).*

It is clear, therefore, that superintendents rely on each other for support and information and for addressing complex problems such as the SBR mandate. With this as a necessary component in understanding how rural superintendents address the SBR mandate, it is important now to look more closely at their internal decision-making processes as well.

Decision-Making Processes of Superintendents

Leithwood, Steinbach, and Ruan's 1993 study certainly provided considerable insight into how superintendents make decisions, identifying three major processes or stages for solving problems: *Processes for Understanding Problems, Processes for Solving Problems, and Processes for Understanding and Solving Problems* (p. 377). Although the above three steps can be understood as a linear process, it is important to note the incredible complexity of problem-solving within organizations and the interchangeability of decision-making steps leaders employ. Problem-solving processes may be entirely different from problem-understanding processes, and when combined, the understanding/solving-process assumes unique characteristics on its own. Furthermore, the processes may be a mix of entirely conscious processes and entirely subconscious processes. The result is that the problem-solving process is incredibly complex and at times hard to define.

First, superintendents generally assess the situation through a process of interpreting the context, considering a broad range of goals, their own personal stake in the decision and the ramifications of the decision on stakeholders. Secondly, they consider obstacles and develop a clear plan or outline for action. Within this second stage, superintendents seem to consider their own personal biases and need to be open to new information. Finally, they consider the impact of their personal behavior and demeanor and how it affects staff or stakeholders (Leithwood, Steinbach, & Raun, 1993). All three of these components can occur separately or simultaneously during the problem-solving process. The processes are similar for other administrative staff as well, and can vary in scope and range depending on a multitude of environmental factors, experience of the administrator, and organizational maturity of staff (Leithwood & Stager, 1989). More insight can also be gained from leadership studies in other disciplines, as well.

Apparently, when leadership involves professionals, the contextual complexity is similar in other areas of leadership. Social motives, gender, personality traits, situational factors, self-esteem and other factors play a big part in both the decision-making/problem-solving process and in the outcome of the decision (Weber, Kopelman, & Messick, 2004). Although the Weber study is from a sociological perspective, the principles seem to apply to leadership in general. According to the Appropriateness Framework as outlined by Weber, experienced leaders facing social dilemmas (as a present in education) confront the situation with a simultaneous assessment of their own position (or identity) and of the situation

itself (Cranston, Ehrich, & Kimber, 2003). They then consider applicable rules, personal and organizational constraints, and policies before making the decisions. Whether inside or outside of education, leaders seem to instinctively act, sometimes without knowing why or what they are doing (Nestor-Baker & Hoy, 2001). This tacit knowledge plays as important a part of problem solving as does the constant consideration of district policies and applicable laws. In summary, the decision-making process for superintendents contains some universally identifiable elements common to most superintendents and situations. It is, however, a messy process entirely dependent on an endless variety of contextual complications and social dilemmas which may affect the process and the outcomes.

The Rural Oklahoma Superintendent and SBR

In order for this study to have meaning, it is important to establish some level of generalizeability among rural Oklahoma superintendents and superintendents as a whole, and research suggests that both rural superintendents and Oklahoma superintendents share experiences with other superintendents across the spectrum. Technically speaking, the differences between rural superintendents and their urban counterparts are virtually null. Professional training, certification requirements, and academic preparation are essentially identical for all superintendents within their respective states. Rural superintendents, however, face a different array of challenges than do urban superintendents. One of the most notable differences is the lack of diffusion of responsibilities. One researcher quotes

a rural superintendent (Jacobson & Woodworth, 1990) who describes a situation wherein almost everything falls on the superintendent:

> *I have been a school superintendent for a small district in a rural area for the past 20 years. As an administrator in a small district, I am "Jack of all trades," and am expected to be an expert on every phase of school operation that you can imagine. No one told me about the trials and tribulations of writing specs for the purchase of a new heater or repairing roofs. The position is getting more frustrating every year because of increased responsibilities and paperwork. Maintenance items keep me frustrated and bogged down (p. 34).*

Rural school superintendents, therefore, have a greater burden of responsibility than do urban superintendents. Without assistant superintendents or large central office staffs, the jack-of-all-trades scenario fits most rural superintendents. In addition to a greater scope and depth of responsibilities, special challenges are closely related to the entire context of rural schools (Decker & Talbot, 1991). Issues such as isolation, close-knit communities, poverty, and cultural idiosyncrasies complicate the rural superintendent's job responsibilities above other settings. Rural schools do present superintendents with some advantages, however.

Rural school superintendents have an advantage as agents of change (De Young, 1995). Because of their hands-on positions and closeness to the communities in which they serve, rural school superintendents may impact their

schools more quickly than possible in larger districts. Studies have also indicated that despite all the challenges, rural schools perform as well as their urban and suburban counterparts. In some cases, they even do better in some areas of NCLB compliance than non-rural schools (Beck & Shoffstall, 2005; Smeaton & Waters, 2008). Research into rural schools is lacking, however, in virtually all areas (Browne-Ferrigno & Allen, 2006; Sherwood, 2000), but rural schools are certainly open to research-based practices (Smeaton & Waters, 2008) and have a track-record of success implementing those practices. In a rare study focused on rural Oklahoma schools, researchers found that educators were very open to research-based practices (Sly, Everett, McQuarrie, & Wood, 1990). Those practices must be adapted, however, to the special context of rural schools in order to be successful (Buttram & Carlson, 1983). Research is even more scant regarding rural schools and the SBR mandate of No Child Left Behind. Insight into the case of SBR and rural superintendents has yet to be gained and is the goal of this dissertation.

Summary and Conclusion

Understanding the SBR issue as it relates to schools, understanding the implementation process from the national to the site level, and understanding how school practitioners tend to deal with top-down policies are all important issues for me to consider as this study continues. The only thing clear at this point is the array of potential problems existing as a result of the SBR mandate. A ground-floor approach must be employed in addressing this problem. Insight into school leaders'

practices regarding SBR is absolutely vital. The following chapter outlines how this insight will be gained and what methodology will be employed.

CHAPTER THREE: METHODOLOGY

Introduction

Disclosure of research methodology is important in understanding the results and implications of any research project. This chapter outlines the methodology, the research questions, population characteristics, population sampling, and treatment of the data. Grounded Theory Methods (GTM) were employed to determine how rural Oklahoma school superintendents determine if educational products are supported by scientifically based research.

Research Questions

The nature of the research question and sub-questions are vital in understanding the rationale for choosing a GTM approach. As with many research projects, the original focus evolved significantly, or rather devolved, as I considered the problems associated with No Child Left Behind's Scientifically Based Research mandate. Questions remain to be answered regarding educators' practice in regard to SBR compliance. I chose to begin in my home state and to focus on the following research question: *How do rural Oklahoma school superintendents determine if educational products are supported by scientifically based research?*

Numerous issues and questions arise, however, in light of the research question. The No Child Left Behind Act, financial factors, purchasing habits, professional training, and SBR oversight all related directly to the question and to the possible outcomes of the research. Therefore, the following issues or sub-

questions were also investigated within the framework of the overall research question.

1. *How much participants know about the SBR component of No Child Left Behind.*
2. *How SBR has affected participants' practice and purchasing.*
3. *How participants understand the ties of SBR to funding.*
4. *Which products or programs participants have used which they consider research-based.*
5. *How participants determine that a product is supported by SBR.*
6. *Which resources have been helpful to participants in complying with SBR.*
7. *How research, especially product-related, has impacted participants' practice.*
8. *How training and education has prepared participants to address SBR.*
9. *How well participants understand educational research fundamentals.*
10. *How district policies and/or procedures address SBR.*
11. *Who oversees SBR compliance within the district.*
12. *How SBR compliance is monitored by outside agencies.*
13. *How SBR has impacted student learning.*

Research Methodology

I determined that grounded theory methodology would be best to investigate the research question. Due to the lack of research into the issue, it would be difficult

to build upon existing theory; instead, the need is to generate theory. Therefore, recommendations, plans of actions, and hypotheses regarding how rural Oklahoma superintendents address the SBR component of NCLB were generated utilizing grounded theory methodology. Grounded theory research deviates from the usual path of hypothesis testing. Since the goal is not to test theory, but to generate theory, a qualitative study employing grounded-theory methodology was adopted for this study. This approach not only allows me to address the existing research question but it also lays the necessary groundwork for future research into the SBR dilemma.

Grounded Theory Methods

A grounded theory study is emergent research which generates theory (Corbin, 1990; Strauss, 1994). The result of such research is often a series of propositions or plans of action (Creswell, 1998; Corbin, 1990) as was the case with this study. Hypotheses – recommendations or plans of action – were generated based upon the interviews of practicing rural Oklahoma school superintendents who had experience complying with NCLB requirements that educational products and programs purchased with federal funds be scientifically research-based.

In addition to diligent efforts to ensure the integrity of the research, routine safeguards as required by the University of Oklahoma Institutional Review Board were also strictly adhered to. No foreseeable coercion, benefit, or harm could be determined to be a risk to the interviewees. The IRB application indicated that all data, notes, recordings, and transcriptions were stored in a locked and secure location and were destroyed upon the completion of the research (Appendix 1). In

order to protect the identity of the research subjects, pseudonyms were used as were any references to the cities or counties of their respective school districts. Full disclosure and informed consent protocols were strictly followed to protect the safety of the participants per University of Oklahoma guidelines.

Grounded theory methodology generally relies on the use of open-ended questions (Calloway, 1995). In the case of this study, a set of predetermined topics to explore were utilized, but I encouraged respondents to elaborate, illustrate, and further qualify their comments. Respondents were constantly prompted to elaborate on answers to the research question and topic areas as it flowed naturally within the interview process.

Some grounded theory studies do not utilize a prescribed set of questions, but I sought to ensure consistency among interviews. Time had to be taken during the interview process, as needed, to help ensure respondents understood the concepts being discussed. A framework of interview questions helped ensure that this information was covered adequately. Another reason I began from set questions wasmyconcern regarding the overall volatility of the No Child Left Behind Act, which tends to lend itself to digression. An interview framework enabled me to establish consistent structure and focus on the issue, but still allowed for open responses whenever appropriate.

This interview strategy is very compatible to the goal of a grounded theory study for a theory to emerge based upon the data (Glaser & Strauss, 1967b). That theory may take the form of hypotheses, recommendations for future research, or

plans of action (Creswell, 1998). With that in mind, a grounded theory researcher should strip him or herself of any predispositions regarding the issue being studied (Glaser, 1967). Therefore, the research questions are usually simple, open-ended, and generalized, designed to be adaptable to the data which does indeed emerge (Glaser, 1967; Strauss, 1998). The general purpose of this research was to gain insight into rural Oklahoma school superintendents' practices regarding SBR and to form theories and recommendations about how to support school administrators as they address NCLB and the SBR issue.

Design of the Study

This was a grounded theory study which relied on qualitative data from one-on-one interviews of practicing rural Oklahoma school superintendents. Additional, publicly available data from the United States Department of Education and the Oklahoma State Department of Education was also obtained in order to gain an accurate understanding of the respective districts' demographics, performance, and faculty characteristics.

Population and Sampling

The No Child Left Behind Act affects every educator in the state of Oklahoma to some degree. I made the assumption, however, that rural school administrators as a group are faced with NCLB compliance as much as other superintendents. Research also supports the idea that rural school superintendents are more hands-on than their urban counterparts, a characteristic which can even afford them more insight into the how SBR is addressed district-wide (Beck &

Shoffstall, 2005; Smeaton & Waters, 2008). In the final analysis, there is no evidence that rural Oklahoma superintendents are not as suitable a population as any other group of school superintendents. Research simply indicates that rural superintendents are as adept and proficient in school matters as any, and further indicates a need for more research into rural schools (Browne-Ferrigno & Allen, 2006; Sherwood, 2000). Concentrating on rural school practitioners provides an excellent starting point for new research and helps build the body of research into rural schools in general.

Not all schools or administrators, however, receive federal funding and would not necessarily deal with the scientifically based research mandate as a normal course of their duties. In schools which receive Title I funding, the burden of responsibility falls at different levels from Title I teachers/directors to site principals. I had to identify one group who consistently would represent the necessary expertise and responsibility across Title I schools. In the state of Oklahoma, that one person is the school superintendent. I also limited the population to practicing superintendents with at least 5 years administrative experience as a superintendent in Oklahoma Title I schools.

Purposeful or theoretical sampling through a gatekeeper (Creswell, 1998) was used to select the participants. “Purposeful sampling is based on the assumption that the investigator wants to discover, understand, and gain insight and therefore must select a sample from which the most can be learned” (Merriam, 1998, p. 61). “In grounded theory, the term is *theoretical sampling*, which means that the

investigator examines individuals who can contribute to the evolving theory" (Creswell, 1998, p). As with purposeful sampling, theoretical sampling involves selecting participants based on their ability to contribute to the research. Participants in this study were chosen based upon theoretical sampling, closeness to the problem, and ability to contribute.

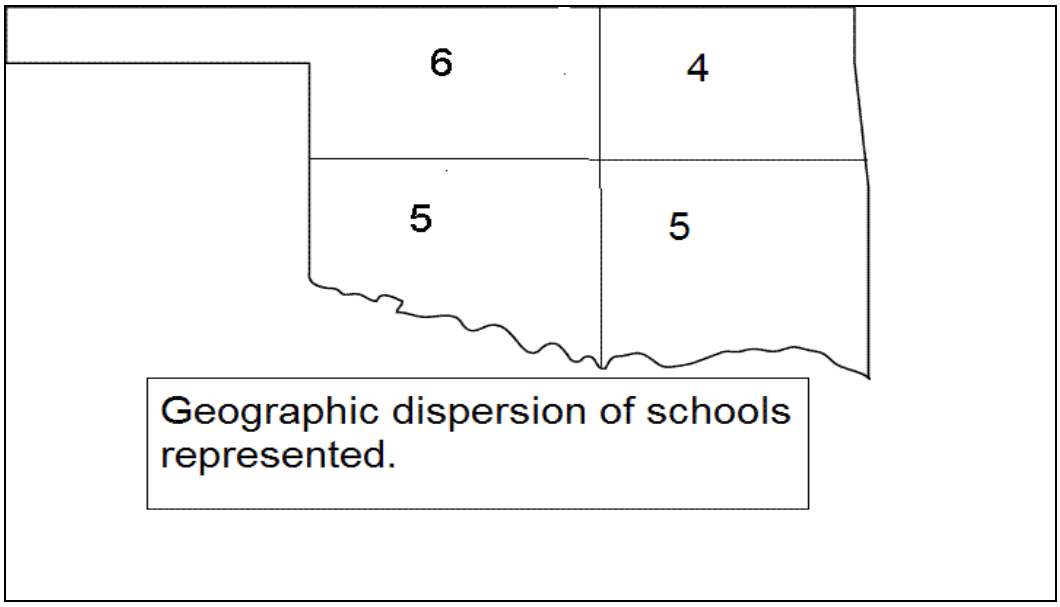
A *gatekeeper* is a trusted entity who can help a researcher gain access to do research (Creswell, 1998). A term often associated with an ethnographic study, the gatekeepers in this case acted both as experts in the field and as trusted entities. Oddly enough, research indicates that school superintendents are not always open to researchers (Melnick & Henk, 2006), so the selection of gatekeepers was in hopes of experiencing more openness from superintendents. The state of Oklahoma's professional association for school superintendents, the Oklahoma Association of School Administrators, and the Oklahoma Organization of Rural Oklahoma Schools both agreed to provide me with a list of suitable applicants from rural schools of differing sizes and locations. From that pool, I chose fifteen candidates to interview, based on school size, school location, and willingness to participate.

Population Characteristics

Superintendents who participated in the interviews were chosen based on recommendations from the Organization of Rural Oklahoma Schools and from the Cooperative Council for Oklahoma School Administrators and represented districts from all areas of Oklahoma. Oklahoma is divided by two interstate highways into four distinct regions, the largest region being the northwest quadrant. Of the twenty

superintendents interviewed, six represented schools from the northwest quadrant, four represented schools from the northeast quadrant, five represented schools from the southwest quadrant, and five represented schools from the southeast quadrant.

Illustration 1: Geographic Dispersion of Districts



All participants served as superintendents in schools which received federal dollars, Title I funds being the largest federal funding area for most of the districts, and had at least five years of administrative experience. Sixteen of the participants were male and four of the participants were female, a number which fairly represents the ratio of male to female superintendents in the state of Oklahoma (Oklahoma State Department of Education, 2009b). All participants possessed Masters degrees and one participant was working on a doctorate degree. Each of the participants were active in either the Organization for Rural Oklahoma Schools or the Cooperative Council for Oklahoma School Administrators. Some of the participants were recommended by both organizations as being ideal candidates for

this study. Years of experience ranged from relatively new superintendents (5 to 10 years experience) to experienced superintendents with twenty or more years of experience. At least two of the superintendents were retiring at the end of the 2008-2009 school year.

Rural District Definition

Little agreement seems to exist on the precise definition of *rural school*. According to the Institute of Education Sciences (IES) report, governmental agencies have historically defined rural according to their own special missions and needs (Arnold, Biscoe, Farmer, Robertson, & Shapley, 2007). Those definitions share similarities but are not uniform. The IES identifies the United States Census Urban-Centric Locale Codes (UCLC) as a new system for rural classification that works well for school classifications as well (as cited by Arnold, Biscoe, Farmer, Robertson, & Shapley, 2007, pp. 6-7). The UCLC identifies three criteria for rural schools:

> *Rural, fringe:41: Census-defined rural territory that is less than or equal to 5 miles from an urbanized area as well as a territory that is less than or equal to 2.5 miles from an urban cluster.*
>
> *Rural, distant:42: Census-defined rural territory that is more than 5 miles but less than or equal to 25 miles from an urbanized area as well as a territory that is more than 2.5 miles but less than or equal to 10 miles from an urban cluster.*

Rural, remote:43: Census-defined rural territory that is more than 25 miles from an urbanized area and is also more than 10 miles from an urban cluster.

For this study, each of the participating districts identified themselves as rural and were active members of the Organization of Rural Oklahoma Schools (OROS). Furthermore, each of them

met all three criteria as outlined by the UCLC to be classified as rural; all met the *Rural, Remote* definition.

District Characteristics

All statewide and district information included in this section was collected from the *State of Oklahoma Education Oversight Board Office of Accountability* as was reported in their *Profiles 2007 District Reports* which were published in 2008 (Office of Accountability, 2008). The districts represented by the superintendents who participated in this study were fairly representative of Oklahoma as a whole, with some exceptions. Communities represented were about 40% smaller (3558, according to 2000 census) than the average Oklahoma community (6390, according to 200 census). Districts' student populations were also about 34% smaller (770) than the average Oklahoma school district (1172). Minority rates were also about 15% lower within these districts as opposed to statewide numbers. Districts hosted 78% fewer African Americans and 90% fewer Asians than the statewide average but showed 41% more Native Americans than did the statewide average. These districts

did have lower gifted and talented rates (17.5% lower) and higher special education rates (12% higher). Student/teacher ratios within the schools were 15% lower than the statewide average of 16 to 1 student/teacher ratio, the sample group showing a 14 to 1 student/teacher ratio. Poverty rates within the district were along state lines even though the average income for districts residents was almost 18% lower than the state average.

Federal Funding Impact. Districts within the state of Oklahoma, on average, receive 12.5% of their annual budget in federal dollars. Districts represented in this study received an average of 12.6% of their budgets as federal dollars (median of 12.3%). The most heavily impacted district received 30.8% of its budget in federal dollars; the least impacted district received only 4% of its budget in federal dollars. Twelve of the districts represented were above the state average of federal dollars received; eight were below.

Illustration 2: Average Federal Funding of Oklahoma Schools

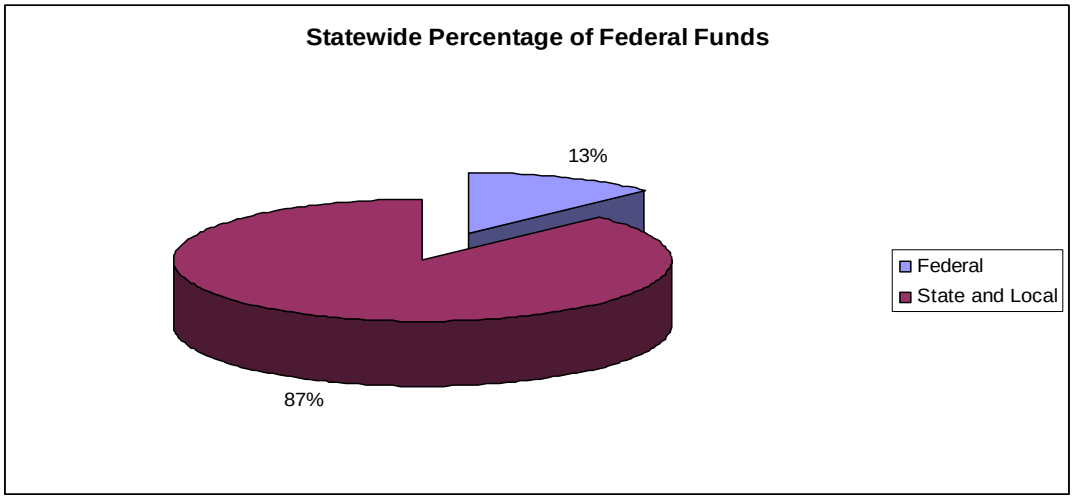
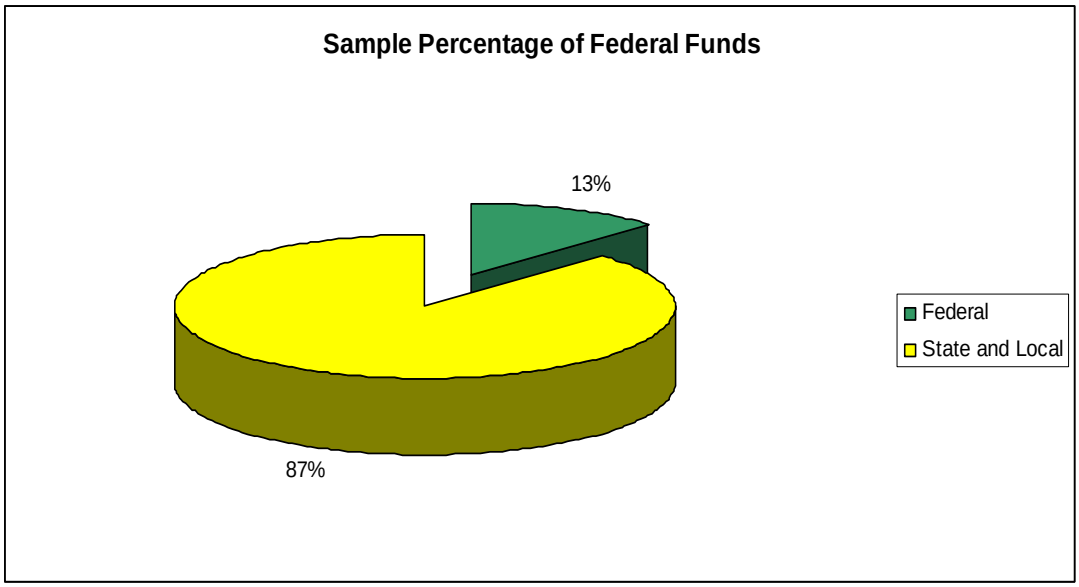
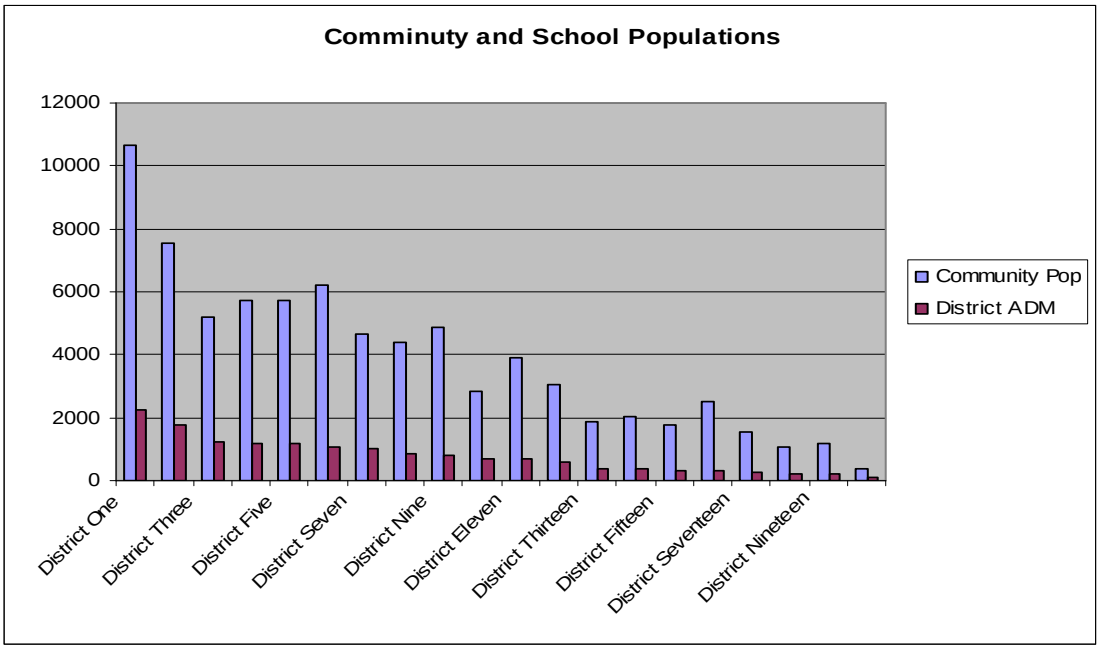


Illustration 3: Average Federal Funding of Sample Districts



District Populations. The average district in the state of Oklahoma maintains an ADM (Average Daily Membership) of 1172 students (SDE). Districts in this study ranged in size from over two thousand students to under one hundred students. The mean ADM for this study was 770 students; the median ADM was 697 students. Thirteen of the districts reported an ADM of fewer than one thousand students. Eight of the districts reported an ADM of fewer than four hundred students. Districts represented communities with populations between three hundred fifty and ten thousand residents – figures that account for the entire school district's populations, which may include several municipalities. According to the 2000 Census, the mean district population was 3858 residents, and the median district population was 3485.

Illustration 4: Population of Sample Districts



Racial Demographics. In the state of Oklahoma, the 2007 minority rate was 41% -- 59% Caucasian, 11% African American, 2% Asian, 9% Hispanic, and 19% Native American. Districts represented reported a mean minority rate of 35% for the same year of 2007 and a median minority rate of 32.5%. Minority rates within the districts were as low as 7% and as high as 59%. By far the largest demographic group was Caucasian (65%) and the largest minority group was Native American (27%) – both populations exceeded the state averages of 59% and 19% respectively. African Americans represented only 2.4% of the represented districts' population and Asians represented only .2% of the population. Statewide averages were 11% and 2% respectively.

Table 1: Racial Demographics of Sample Districts

	Percent White	Percent African American	Percent Asian	Percent Hispanic	Percent Native American	Percent Minority
District One	72	5	1	13	10	29
District Two	51	10	0	6	32	48
District Three	66	1	0	2	30	33
District Four	68	0	0	2	30	32
District Five	68	0	0	2	30	32
District Six	44	1	0	4	51	56
District Seven	41	7	0	1	51	59
District Eight	68	9	1	15	6	31
District Nine	59	1	0	3	37	41
District Ten	50	2	0	3	46	51
District Eleven	93	1	0	2	4	7
District Twelve	41	1	0	13	45	59
District Thirteen	81	1	0	4	13	18
District Fourteen	57	1	0	2	40	43
District Fifteen	93	1	1	1	5	8
District Sixteen	64	0	0	1	35	36
District Seventeen	84	2	0	9	5	16
District Eighteen	40	2	0	0	57	59
District Nineteen	83	3	1	6	8	18
District Twenty	76	0	0	24	0	24
Mean	**64.95**	**2.4**	**0.2**	**5.65**	**26.75**	**35**
Median	67	1	0	3	30	32.5
STATEWIDE	**59**	**11**	**2**	**9**	**19**	**41**
Percent Diff.	**10.08%**	**-78.18%**	**-90.00%**	**-37.22%**	**40.79%**	**-14.63%**

Economic Indicators. In 2007, Oklahoma schools had a Free-and-Reduced Lunch (FRL) rate of 56%, a poverty rate of 15%, and an unemployment rate of 5% statewide. Represented districts reported an average FRL rate of 59%, which is

Table 2: Economic Indicators of Sample Districts

Economic Indicators	Free/ Red Lunch Rate	Poverty Rate	Unemployment Rate	Average Income
District One	47.9	19	7	$38,598.00
District Two	76.2	30	9	$28,272.00
District Three	54.1	12	3	$41,283.00
District Four	49	13	4	$37,401.00
District Five	49	13	4	$37,401.00
District Six	73.4	16	4	$37,861.00
District Seven	80.8	23	8	$32,387.00
District Eight	60.4	19	5	$33,071.00
District Nine	46.7	9	3	$42,578.00
District Ten	64.5	14	2	$39,814.00
District Eleven	42.3	11	4	$43,189.00
District Twelve	81	24	8	$33,843.00
District Thirteen	60.9	14	4	$35,730.00
District Fourteen	66	19	4	$35,737.00
District Fifteen	53.1	11	3	$35,645.00
District Sixteen	47.6	15	6	$38,713.00
District Seventeen	49.2	12	3	$31,159.00
District Eighteen	77.9	13	4	$36,711.00
District Nineteen	40.2	12	2	$42,605.00
District Twenty	52.1	22	3	$29,881.00
Mean	**58.615**	**16.05**	**4.5**	**$36,593.95**
Median	53.6	14	4	$37,056.00
STATEWIDE	**56**	**15**	**5**	**$44,370.00**
Percentage Difference	**4.67%**	**7.00%**	**-10.00%**	**-17.53%**

higher than the statewide average; the median FRL was 54%. Poverty rates for the represented districts ranged from 9% to 30% with an average poverty rate of 16% (median rate 14%). Unemployment rates ranged from 2% to 9% and were in line with state averages. The average income for the represented districts was

$36, 593.00 versus a statewide average income of $44,370.00 – a difference of about $8,000.00.

Educational Indicators. All three community educational attainment indicators tracked by the state of Oklahoma were identical to the represented districts. Percentage of residents with college degree (17%), percentage of residents with a high school diploma (59%), and percentage of residents with no high school diploma (25%) were the same when comparing the statewide numbers and the represented districts' numbers. The percentages of residents with college degrees, however, dipped into single digits for two of the poorer districts but no higher than 21% for the districts with the highest percentage of college completion rates. And while the percentages of Gifted and Talented students within the respective districts (11%) was lower than the statewide average of (13%), the special education rate of 17% was much higher than the statewide average of 12%.

Table 3: Educational Indicators of Sample Districts

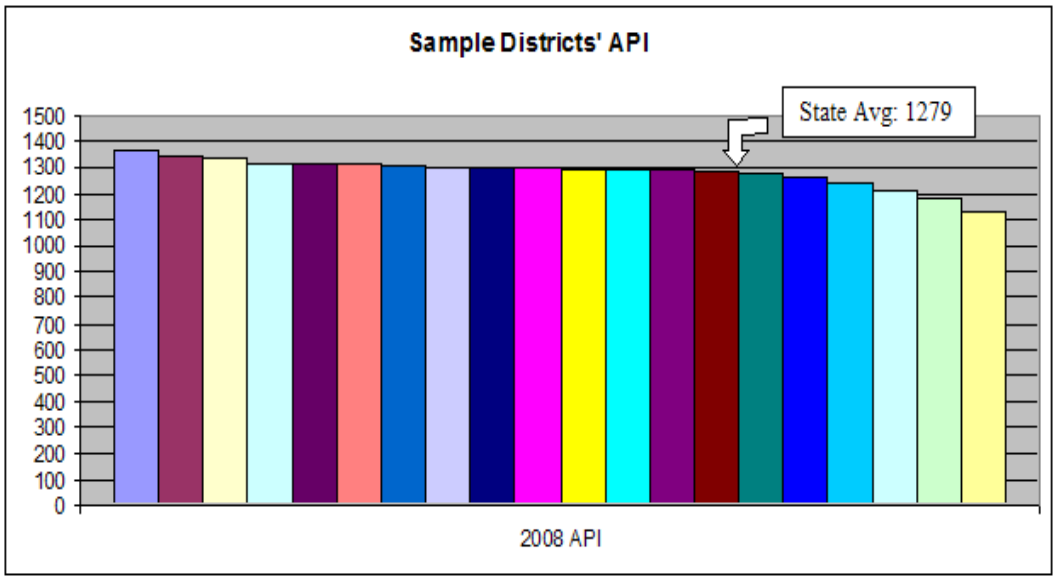
Educational Indicators	Percent with College Degree	Percent with only HS Diploma	Percent without HS Diploma	Percent Students in Gifted and Talented	Percent Students in Special Education	Student Teacher Ratio
District One	21	55	24	4.6	12.4	15.5
District Two	13	55	33	10.1	13.8	15.8
District Three	18	60	23	16.8	15.6	16.2
District Four	14	58	28	10.3	22.2	16.3
District Five	14	58	28	12.3	14.1	16.3
District Six	15	59	26	14.6	18.8	15.6
District Seven	19	52	29	8.5	25.7	16.4
District Eight	21	56	23	4.4	16.9	16.4
District Nine	17	63	20	11.1	15.6	18
District Ten	17	59	25	10.6	13.4	16.5
District Eleven	19	58	22	13.9	20.5	13.2
District Twelve	17	58	26	10.9	15.9	11.9
District Thirteen	18	63	19	6.4	17.9	11.1
District Fourteen	17	65	18	11.4	12.5	13
District Fifteen	17	63	20	7.8	12.6	15
District Sixteen	9	60	31	9.1	20.5	12.7
District Seventeen	18	59	23	7.7	15.7	11.6
District Eighteen	9	62	29	20.7	15.9	12.9
District Nineteen	21	60	19	7.9	15.3	9.5
District Twenty	19	57	25	12.1	21.8	8.8
Mean	**16.625**	**59**	**24.0625**	**10.56**	**16.855**	**14.135**
Median	17	59	23.5	10.45	15.8	15.25
STATEWIDE	**17**	**59**	**25**	**12.8**	**15.1**	**16.7**
Percentage Difference	**-2.21%**	**0.00%**	**-3.75%**	**-17.50%**	**11.62%**	**-15.36%**

Academic Performance. Oklahoma measures a district's Adequate Yearly Progress through a scale called the Academic Performance Index, or API*:*

> *Oklahoma's Academic Performance Index (API) was created in law to measure the performance and progress of a school or district based on several factors, primarily state assessment scores, that contribute to overall educational success. The possible scores range from 0 to 1,500. The factors used in the calculation of an API score include:*
>
> • *Oklahoma School Testing Program (OSTP)*
>
> • *School completion - including attendance, dropout, and graduation rates.*
>
> • *Academic excellence - includes ACT scores and participation, Advanced Placement (AP) credit, and college remediation rates in reading and mathematics. (Oklahoma State Department of Education, 2009a)*

The average school in the state of Oklahoma registered a 27 point increase in their API from 2007 to 2008, 1252 and 1279 respectively. The mean increase in API from the study sample was 22 points, a difference from 1261 (2007) to 1283 (2008). Overall, the sample schools posted a slightly higher API (1279 versus 1283) than did the average school in the state of Oklahoma for the academic year of 2008. Academically, there simply was not much difference between the represented districts and the statewide API statistics.

Illustration 5: API Scores of Sample Districts



Data Sources

This study relied on qualitative data from one-on-one interviews of practicing Oklahoma school superintendents. Additional information which was publicly available from the Oklahoma State Department of Education was included as necessary to provide demographics, test scores, Academic Performance Indices, and faculty characteristics.

Grounded theory studies allow for the inclusion of multiple data sources (N K Denzin & Lincoln, 1994), but the primary method of gathering raw data is through qualitative interview-based research. These interviews were conducted involving Oklahoma school superintendents with at least 5 years experience dealing with the SBR mandate. Respondents were recruited through the Cooperative Council for Oklahoma School Administrators and the Organization for Rural Oklahoma Schools. Based upon the recommendations of those organizations'

officials, participation in the study was solicited until enough candidates were identified who were willing to participate in the interview process and whose schedules fit into the research window. The number of interviews in a grounded theory study is not usually able to be predetermined due to the nature of the study. Interviews were generally conducted over the phone. Participants were faxed or e-mailed the questions prior to the interviews upon request.

Data Collection

Twenty practicing school superintendents with at least five years' experience in Oklahoma Title I schools were interviewed in a one-on-one format using open-ended interview questions. Due to the great distances between schools, the interviews were conducted over the phone. Participants were spaced around the state of Oklahoma, some over 500 miles apart. All interviews were recorded, if agreed to by the participant, to better enable me to analyze data. Interviews were not transcribed word-for-word because this step is not necessary in Grounded Theory Methodology (Glaser, 1998). Portions of each interview were transcribed, however, as needed.

Treatment of data was governed by University of Oklahoma Institutional Review Board (IRB) guidelines. Approval for this research study was gained through the IRB (Appendix 1), which dictates that all data and sources be maintained in locked, secure storage. All participants were assigned pseudonyms; once data collection and analysis was completed, all data interview notes, computer files, and other personally identifiable data were destroyed. No information was

included which could connect the participants to their respective schools. Schools and their respective communities were identified with pseudonyms as well.

All interviews were conducted over the phone and were recorded when permitted by the subjects. Only one participant expressed concerns at being recorded, so that interview was not recorded. Prior to beginning the interview process, the participants were briefed on confidentiality requirements, the purpose of the research, the scope of the questions, and were asked if they had any questions or concerns. All participants completed Informed Consent forms as required by the University of Oklahoma Institutional Review Board (IRB). Interviews ranged in length from forty-five minutes to eighteen minutes, the shortest interview being cut short my the participant because of job duties.

Contacting Subjects

Twenty-eight participants were initially contacted through e-mails explaining the study, who referred them as candidates, and other housekeeping issues. Pasted within the body of the e-mail and attached as a document was the IRB Informed Consent form as well. Interestingly enough, only one person responded from the e-mails, something that became significant later in the interview process. Only through direct phone calls did the remainder of the participants agree to participate, many of them expressing relief that I was an actual school administrator. The remaining seven subjects were never contacted by phone since saturation occurred with twenty participants.

Interview Format

In order to keep the interviews flowing naturally, I created a flip-chart system in which each topic area could be addressed and field notes could be documented. The flip-chart system ensured that I explored each area fully with each subject and also enabled him the freedom and flexibility to move freely through the questions as appropriate, based on the subjects' responses and free-flow of ideas. A total of fourteen pages were allotted for each subject's interview, the fourteenth question merely being "Do you have any further thoughts regarding the SBR issue or the No Child Left Behind Act?"

Field Notes

During the interview, I would take field notes on the appropriate page which was labeled with an alpha-numeric pin number which was recognizable only to me. A margin was created on the right of each paper which was left blank during the interview process. As soon as was practical after each interview, I would review the filed notes and jot down ideas and concepts which seemed to emerge from the data. The added notes and comments were generally written in a different color of ink so as to be more noticeable in later stages of analysis. This two-stage system not only allowed me some flexibility but also afforded him two passes at the data before open coding officially began. Numerous memos grew out of this process which later developed into core concepts for this study.

Recordings

By recording the interviews, I afforded myself the advantage of being able to concentrate the essence of each respondent's views during the actual interview. As quotes or ideas struck him ,I was able to jot down a note and adapt the interview as needed without feeling compelled to capture every word. Once all interviews were completed and the initial saturation had occurred, I began a process of partial transcription and paraphrasing the recordings. During this process, I would pause the file and create memos as they struck him. This formed the foundation of my open coding process.

Data Saturation

Although the IRB for this study allowed for 30 participants, it became clear to me that saturation would be achieved before conducting the full number of interviews. Indeed, some topics within the interviews became saturated very quickly, which allowed me to delve deeper into other, more complex issues. In this regard, the interviews format and feel evolved significantly from the initial interview to the final interviews. In those final interviews, I found myself concentrating on only a few areas pertinent to the research question and a few tangents which had managed to emerge from the earlier interviews. The interviews began to evolve noticeably after about ten interviews. By the fifteenth interview, saturation had been achieved in most areas, but I felt compelled to conduct several more interviews in order to further explore some emerging concepts. By the

twentieth interview, no new ideas or concepts were emerging, so the data collection phase ended.

Data Analysis

One important characteristic of qualitative research is its exploratory nature. Data analysis can occur in the earliest stages of data collection and continue through the final draft of the research (Creswell, 1998; Merriam, 1998). Such will be the case with this research. And since grounded theory studies are, ideally, detached from theory (Creswell, 1998), data analysis was conducted with the goal of creating a realistic description of these superintendents' realities concerning the SBR mandate.

The goal of Grounded Theory Methodology is to achieve data saturation. Data saturation is achieved when the researcher can no longer identify new categories of data. In order to accomplish this, the research must subject the data to multiple levels of coding – a process which involves categorizing and re-categorizing the data until nothing new emerges (Glaser, 1967). This methodologically complex and time-consuming process helps to guard the research from presuppositions regarding the phenomenon. Such validity safeguards are necessary since GTM is designed to generate a theory instead of trying to test a pre-existing theory. This study operates on the idea that all data is important as it relates to the SBR issue. Such is Glaser and Strauss's view (1967) regarding Grounded Theory Methodology.

I recorded the interviews, when consent was granted, and made partial transcripts. Glaser suggests that taping (1998) is not a helpful practice in GTM due to the flowing nature of the research. Dick (2005), however, suggests that dissertation or thesis researchers make the recordings as a reference and compare those recordings with their field notes in order to provide additional validity for the dissertation process. Therefore, I did record interviews and partially transcribe them in order to have the ability to refer to them as needed for clarification of my field notes.

Data analysis in GTM depends on a systematic examination of the data through a series of progressively intensive data analyses – open coding, axial coding, and selective coding. Although many different phases and sub-phases of coding have been identified (Glaser, 1967; Strauss, 1998), open, axial, and selective coding have emerged as the most universally accepted phases of Grounded Theory Methodology (LaRossa, 2005). As a matter of fact, Glaser (1978) indicated that two phases were necessary as long as several other sub-phases were also incorporated. It is clear that use of the coding process is inconsistent among researchers, some of whom omit one phase or another during the process. All three phases were utilized in this study to ensure that some framework existed to help determine that data saturation had been achieved. At any stage of coding, a researcher may find data that indicates the need for more interviews.

Open Coding

The first stage of data analysis involved open coding, which is simply the first stage of categorizing the data into distinct categories to identify concepts or indicators. *Indicators* are simply words or phrases that seem to recur and *concepts* are simply the underlying meaning assigned to those words or phrases by the researcher (Glaser, 1978, p. 62-63; Strauss, 1998, p. 25-26). This process is a matter of my relying on my insight and intuition regarding the subject and determining when no new, significant concepts have emerged. This indicates *data saturation,* a state of reaching "the empirical limits of the data, the integration and density of the theory, and the analyst's theoretical sensitivity" (Glaser, 1967, p. 62.). This simply indicates that I continue to interview until no new data seems to emerge. For this reason, an initial pool of twenty interviewees were approved through the IRB process and a modification was requested which allowed for 30 participants.

I prepared for open coding through my two-stage field notes and through my partial transcriptions of recorded interviews. During this stage, I attempted to separate and label all field notes. These *indicators, categories, and concepts* (Glaser, 1978, 1998) enabled me to then separate the entire body of notes and memos by their indicators. The result was the over 600 pages of separate field notes and memos which then had to be further refined so that each memo concentrated on a single concept or idea. By the end of the coding process, all field notes had been represented by individual computer memos or note pad sheets.

Axial Coding

The second state of data analysis was axial coding. Strauss (1987) indicates that axial coding is the logical, next step of the coding process during which the researcher individually analyzes the categories/concepts identified in the open coding process. A process similar to the open coding process is then performed with each concept wherein the researcher re-examines field notes to find new relationships and subcategories related to those previously identified concepts (Strauss, 1998). In open coding, the researcher is attempting to identify concepts for further inspection; in axial coding the researcher is breaking down those concepts even further.

Once categories and concepts had been identified through the Open Coding process, I began to consider those concepts and categories among themselves through axial coding. During this stage, I reexamined the notes and attempted to identify patterns and relationships between related concepts and among groups of categories (Glaser, 1978, 1998). Further memoing occurred during axial coding as well, as I attempted to capture new connections and sub-categories as they emerged. As a result of axial coding, a clear road map began to emerge from the data.

Selective Coding

Selective coding is the final stage of data sorting in which the researcher attempts evaluate the coded data and to identify a central phenomenon (Strauss, 1998). This is the final sorting stage for the data before the researcher attempts to formulate a theory. In this case, the theory is a set of strategies, recommendations,

or a plan of action for practitioners faced with SBR implementation. Although the coding process may be completed, constant reference to the data continues as the emergent theory is identified. The final stage before writing involves assembling the almost endless reams of data into one, emergent theory through further sorting, memoing, and data comparison until coherence is achieved.

During the open coding process, I attempted to break down a very large body of data into individual categories and concepts. During axial coding, I organized and evaluated each of those concepts and categories in light of the others with the goal of establishing cohesion and finding patterns among the data. In the Selective Coding stage, I examined those axial codes in an attempt to identify a central theme that captured the essence of rural Oklahoma superintendents' experience with scientifically based research (Glaser, 1978, 1998). Again, the constant comparative method was invaluable in that all data had to be re-considered afresh in order to ensure that any conclusions were truly grounded to the data and not to my personal experiences. The result was a central theme representative of the sample's professional practices and experiences with SBR and NCLB.

Regarding Grounded Theory Methodology, it is clear that there is no rigid framework of procedures, nor does it seem that Glaser (1967) ever intended to produce such a process. Strauss and Corbin (1998, p. xi) seemed to agree: "This is not . . . to be applied to research in a step-by-step fashion." With this in mind, the research into the rural Oklahoma superintendents and SBR remained flexible and represents a composite of experiences as I dealt with this issue. The ultimate goal

remained clear: to allow a theory to emerge from the research, and not to drive the research by theory.

Constant Comparative Method

The coding stages ensure that the researcher mines the data exhaustively through a constant comparative method (CCM) of data analysis. With CCM, the researcher is continually reconsidering incidents as patterns begin to emerge from the data (Glaser, 1998). Earlier concepts and conclusions are constantly compared with emerging concepts in an effort to ensure that the results of the study are grounded to the data and not to the researcher's own biases or preconceptions. The goal of the constant comparative method is saturation: "Theoretical saturation of a category occurs when, in coding and analyzing both, no new properties emerge and the same properties continually emerge as one goes through the full extent of the data" (Glaser, 1978, p.53). This practice ensures that concepts which emerge earlier in the data collection and analysis process are considered equally with newly emerged concepts and ideas. In the final analysis, all concepts must fit cohesively within the overall pattern of emerging concepts. In other words, constant comparative analysis helps ensure that the concepts which emerge are truly grounded to the data.

Memoing and Sorting

Memoing and the sorting of those memos are the central mechanisms underlying all stages of GTM data analysis. It is integral to grounded theory research and continues throughout the study. "Memos are the theorizing write-up of

ideas about codes and their relationships as they strike the analyst while coding" (Glaser, 1978, p. 83). A key part of constant comparative analysis, memos can be as simple as a *jot*, or a sentence, or as elaborate as several pages (Glaser, 1998). Each memo, however, concentrates on only one concept. Since memoing occurs throughout the study, even during data collection, memos provide the continuous stream of ideas which allow concepts to emerge from the data. Memos, in one form or another, are the concepts which are sorted, compared, and refined throughout the entire study. This sorting process occurs repeatedly as the emerging concepts and patterns are compared to each other (Glaser, 1998). Concepts, not data, are sorted over and over again until those which are solidly grounded to the data recur over and over (Glaser, 1978) At the conclusion of the study, memos are arranged and form the functional outline from which the researcher begins to write his or her research. They form the basis of GTM analysis from beginning to end.

Memoing began very early in data collection, after only the second interview. I began by using small, yellow note pads in conjunction with the flip chart notes, but eventually discovered the advantage of simply keeping an open document window in the background of my personal computer for use as connections formed and ideas occurred to him. I also utilized a microphone and transcription software when driving on long trips, which enabled him to brainstorm freely as I drove. Over 50 full pages of dictation were produced in this fashion, but unfortunately, much of it was useless for data analysis. Nearly 100 yellow pad memos and over 200 computer memos were ultimately created, in addition to the

260 pages of field notes, which were analyzed during the coding processes. These memos captured the key ideas and concepts of the study and eventually formed the basis for the study conclusions and recommendations.

Researcher's Perspective

My background includes eight years as a classroom teacher in secondary language arts and K-12 Spanish with eight years of experience as a principal at all levels. As a classroom teacher, I learned the value of research-based practices when I applied second language acquisition research to my classroom practices. The approach was based on Dr. James Asher's research into the Total Physical Response method of teaching Spanish (Asher, 2000). The success of this approach led me to rely more and more on research for my instructional methods in all courses. My sophistication as a consumer of research, however, was very limited, even as I entered my doctoral program at the University of Oklahoma in 2005.

A Personal Struggle With SBR

At this point, I was in my fourth year as an administrator and had dealt extensively with the SBR issue through my involvement in several grants and federal programs. A particularly sore spot was an incident involving a very large grant early in the implementation stages of NCLB. The grant required that the interventions be scientifically research-based to impact overall school reform. He chose the North Central Accreditation process as my intervention. The grant committee approved the grant on the contingency that I utilize another intervention because NCA did not meet its SBR thresholds. Instead of doing this, I appealed to

the highest levels of the state department of education and received substantial support. I produced volumes of research to support the NCA process. Unfortunately, the United States Department of Education made the call and the grant failed.

This was fresh in my mind as I began my doctoral studies, so my interest naturally leaned toward this issue. Another doctoral student and I became so interested in the issue that they established a non-profit corporation called Educational Underwriters, Incorporated (EdU). The purpose of EdU was to establish a simple seal of approval for educational products, programs, and practices. EdU experienced some success, but no research existed to support the mission. They focused on the role of a certification intermediary (CI) as their prospective areas of research. During that time, I personally wrote research reviews for several companies and for several products. Since the summer of 2007, the EdU Seal of Approval has appeared on a limited number of products worldwide. All work on EdU is on hold in order to concentrate on my responsibilities as a researcher. EdU is dormant and is not accepting new business, the decision being that SBR must be investigated before continuing the endeavor.

Summary

This dissertation employed qualitative research through grounded theory methodology. Participants were chosen through purposeful sampling, and research practices are subject to Oklahoma IRB guidelines and protections.

CHAPTER FOUR: RESULTS

Introduction

This chapter contains an account of how data analysis occurred and an overview of the interview results as they related to each topic area explored. A total of 20 practicing Oklahoma Superintendents with at least 5 years of experience in administration were interviewed. All participants represented Title I schools which were members of the Organization of Rural Oklahoma Schools and whose communities met rural definitions as outlined by the United States Census Bureau (Arnold, Biscoe, Farmer, Robertson, & Shapley, 2007). Rural superintendents were chosen for their hands-on roles in their small schools; Oklahoma superintendents were chosen because it was my state of residence.

Research Question and Sub-Topics

The research question for this study was the following: *How do rural Oklahoma school superintendents determine if educational products are supported by scientifically based research?* The following issues or sub-questions were also investigated within the framework of the overall research question:

1. *How much participants know about the SBR component of No Child Left Behind.*
2. *How SBR has affected participants' practice and purchasing.*
3. *How participants understand the ties of SBR to funding.*
4. *Which products or programs participants have used which they consider research-based.*

5. *How participants determine that a product is supported by SBR.*
6. *Which resources have been helpful to participants in complying with SBR.*
7. *How research, especially product-related, has impacted participants' practice.*
8. *How training and education has prepared participants to address SBR.*
9. *How well participants understand educational research fundamentals.*
10. *How district policies and/or procedures address SBR.*
11. *Who oversees SBR compliance within the district.*
12. *How SBR compliance is monitored by outside agencies.*
13. *How SBR has impacted student learning.*

The Interview Results

Transparency is the hallmark of Grounded Theory Methodology. And, even though it is not a step-by-step prescription, the strength of GTM is in full disclosure of the processes employed throughout data collection, data analysis, and theory formulation (Glaser, 1978, 1998; Glaser & Strauss, 1967b). This commitment to full disclosure allows consumers of grounded theory research to follow the data trail from beginning to end and affords them insight into the processes by which theory was generated. These factors, among others, are why GTM is often more easily understood by practitioners and lay people and generally results in trusted outcomes (Glaser, 1978, 1998; Glaser & Strauss, 1967b), especially in areas lacking in research. The following section contains a synopsis of results for each of the topics

explored during the interview processes. Graphs were inserted which represented emergent themes and categories are presented in each section as well to enable the reader to follow along and to ensure the reader that the results of the study were truly grounded to the data.

Knowledge of SBR and NCLB

Participants were first given the opportunity to describe the Scientifically Based Research requirement of NCLB as they understood it. This ensured that I had an opportunity to assess their levels of awareness of the mandate, their understanding of the requirement, and their personal opinions regarding SBR. This question served as a base of operations for the remaining twelve questions and often resulted in my abandoning the order of questions in order to preserve the natural flow of the conversation. As the interview process evolved, this initial question provided the opportunity to address some of the topics that achieved early saturation quickly and efficiently so I could explore emerging concepts and ideas.

The Rural Oklahoma Superintendents sampled clearly did not understand the specific requirements of the SBR mandate of No Child Left Behind. This became evident early on not only through their responses but also through their avoidance of the SBR subject in favor for discussions on testing, Adequate Yearly Progress, and NCLB in general. Even the doctoral student, who clearly understood principles of educational research and asserted that SBR drove her purchasing habits, described SBR as including a broad range of research methodologies and data forms. “Data triangulation . . . some of the research is qualitative, but you also want quantitative

research" began her explanation of how SBR is determined. Another superintendent who had actually taught master's level courses as an adjunct professor, including educational research, lamented the lack of clarity regarding SBR, "It gets to be very subjective as to what is research-based and what is not." Both of these superintendents professed an affinity for research and a dedication to SBR, but did not know how NCLB defined scientifically based research.

More typical, however, were the superintendents who simply did not understand SBR or educational research fundamentals. They were definitely aware of the requirement. "Anything we do has to be scientifically based," explained one superintendent, capturing the essence of the law without any specifics. Another superintendent explained, "There has to be a lot of research," but he could not elaborate any further on the topic, while yet another was quite honest when asked to describe the SBR requirement: "I am not sure I can . . . but we are doing it." A basic awareness of SBR is the best that can be asserted among the participants.

Responses ranged from ambivalence among those who saw SBR as simply another nuisance mandate to outright hostility, especially among those who insisted on commenting on NCLB in general. Three of the participants expressed a genuine interest in research and employing SBR in their schools as much as possible. Universally, however, weightier issues, such as high-stakes testing, highly qualified teacher requirements, and AYP dominated their attention to No Child Left Behind. Generally speaking, SBR was an afterthought, or at best, an interesting idea if time permitted.

This does not indicate, however, a lack of understanding or appreciation for research. These men and women valued research, but not SBR. The research they discussed and identified with was based on data and evidence, especially local data and evidence. Also, very evident within this group was a keen awareness of the concept of *generalizeability.* "Ninety percent of research will not work (in the classroom), it doesn't account for individual needs. Cookie cutter approaches do not work." Such was a major, recurring concept related to SBR, a concept which re-merged across all interviews and with all subjects. Failure to compare "apples to apples" was the most common expression which expressed their lack of faith in "east coast" or "ivory tower" methods working in their classrooms.

Such comments and attitudes convinced me early on that these men and women held formal educational research in contempt, but that was not the case at all. Instead, they simply saw research differently, especially research which has real-world value. This concept emerged when respondents would shift from discussing "so-called research" to discussing a brand of practitioner research which they practice every day and rely upon heavily when making decisions.

Such an attitude pervaded discussion of NCLB as well. In the cases of SBR and NCLB both, subjects generally understood the underlying intentions but considered the approaches "unrealistic" and "poorly implemented." They were, in other words, fair-minded enough to admit the merit of the research-based focus as well as the goals of NCLB. Every single participant managed to offer NCLB redemption of some sort, even those who were most negative towards NLCB and

SBR. On the other hand, one or two were very supportive and welcoming regarding NCLB and all of its mandates, SBR included. Accountability was not seen as a bad thing.

What was seen as bad, however, was that accountability was not consistent or uniform – something that applied to SBR as well: "It needs to be more standardized across the nation. I think we are still playing at different levels at different states," remarked one superintendent when asked to explain what he could tell me about the SBR mandate. Such remarks also supported the assertion that these superintendents did not understand SBR as outlined in NCLB; they were not aware that very specific guidelines were in place regarding SBR. SBR was being looked at through the lens of other NCLB mandates which allow for state interpretation.

SBR being open to interpretation was also an issue which began to emerge from the data, a concern which permeated all discussions regarding research, data, and evidence. A general sense existed that someone could make any research, any results, and any data point in any direction they wanted. This was why participants did not trust SBR, which is always provided through the vendor: "We don't take their word for it," explained one superintendent, "we ask for references." Subjects would verify a products' efficacy with the Oklahoma State Department of Education and other educators most often. They did not trust vendors' research at all, even if it did meet NLCB requirements. Everything had to meet their own thresholds for evidence, which are completely different than SBR components and will be

discussed in later sections, along with the trust issues with SBR. SBR was not trustworthy to them.

A general sense of suspicion surrounding SBR emerged regarding this first question of the interview. Participants all shared a sense of an agenda behind SBR (and NCLB), usually political or commercial, and therefore approached all things SBR and NCLB with definite skepticism. They saw SBR as limiting school choices to only certain products and programs, expressing concerns for smaller companies and conflicts of interest on several occasions. With this in mind, they felt powerless and frustrated regarding NCLB and SBR. In the end, SBR is perceived as an elemental force, like the weather, driven by the anonymous "them" whose agendas are not in the best interest of rural Oklahoma schools. A true sense of fatalism exists regarding all things NLCB, a sense that it is thrust upon schools and they must deal with it as best they can.

Palpable frustration existed among the superintendents regarding SBR (and NCLB) and its ramifications for schools. All superintendents lamented the unfunded nature of NCLB, the added burden to schools regarding paperwork, and a sense of unreasonableness about everything NCLB. Although most of them admitted that NCLB has resulted in some benefits, they all saw it as a drain on existing resources and people. Dealing with SBR, therefore, becomes a matter of priority. SBR does not share center stage with the more publicized elements of the law, so SBR compliance has not been important.

It is with this mindset that these superintendents approach SBR, most of them clearly without any interest or understanding of the issue. The reason: compliance is assumed; otherwise, someone would have told them. Otherwise, more noise would surround the issue. Even though he couldn't describe SBR mandates in the least, one superintendent was nonetheless confident regarding compliance, "We just do that." SBR is a non-issue to them in many, many ways as can be seen in the next topic question.

Table 4: Knowledge of SBR

Question One: Knowledge of SBR Emerging Concepts and Ideas
SBR = NCLB = SBR: Inseparable issues.
Dual views of research exist.
SBR is not real research.
SBR is closely related to testing.
Generalizeability is a serious concern.
SBR process suspicious.
Apples to Apples.
Ambivalence to research.
Contempt for formal research.
SBR not trustworthy.
Drain on Resources.
Intent vs. Implementation.
Unrealistic expectations of NLCB.
Reliance on local evidence and data.
Vendors main source for SBR.
Presumption of compliance.
Concerns about conflicts of interest.
Practitioners rely on different evidence.

Effect on Participants' Practice and Purchasing

As one superintendent explained it, "The intent is that we want to make sure that what we are spending our time doing actually does what we want it to do. We actually want to make sure that we are implementing programs and that our teachers are using things that actually have an impact on student achievement." SBR is intended to guide federal fund expenditures for very good reasons; superintendents understand it. Unfortunately, SBR has not had much of an impact on rural Oklahoma school superintendents' practice or purchasing. SBR has emerged more as box-to-be-checked, a requirement that no one is really paying attention to, even though most understand the importance of it on many levels: "I don't think there's any difference from what we bought before."

This is not to indicate that SBR has had no impact on schools or on educators. It has had an impact in significant ways. Primarily, educators in general have become better consumers of research, more data-driven, and more interested in being professionally driven by evidence. Superintendents see themselves and their staff as having a greater affinity for evidence of all types. This is not necessarily attributable to NCLB. Rather, SBR is seen as a result of the already evolving professional culture in education which prizes research and evidence. In the minds of these practitioners, No Child Left Behind did not establish SBR; it simply verified an existing trend in education by codifying research.

This codification has made it more of a priority when spending Title funds, but it has not translated across the curriculum. None of the superintendents indicated

any concern for SBR unless federal money was involved, and since the bulk of their federal funds are utilized in salaries, SBR apparently guides only a fraction of spending in these rural schools. The focus on research can be seen as having fed a demand for evidence among educators. “We are a lot more careful (in our purchasing practices),”explained one superintendent regarding SBR. Another veteran superintendent said, “We certainly do our homework on our end.” Their brand of homework, however, is not SBR research. SBR research is something that is just asked for.

Vendors provide them with SBR. This supports their products and programs that they purchase in an official sense. The presentation of research has become an integral part of the sales pitch for educational vendors and an integral box to check for purchasers. SBR is not what they rely on when making decisions regarding which products or programs to purchase – unless it is something they are required to buy. As one participant put it, “We don’t take a company’s word for it.” Not much heed or respect at all is given to the SBR produced by vendors because it is a commercial endeavor. Vendor-presented SBR has an agenda in the mind of educators – an agenda to sell products. Rural Oklahoma superintendents rely on their own modes of research to determine if a product or program is effective.

In that sense, all of these men and women rely on research before making purchases in all areas and with all funding sources. The cornerstone of that research is talking to other educators. The steps involved in that research will be discussed later in this chapter, but what is important is that SBR is not a factor beyond

checking the box. Several of the twenty participants' schools underwent Title I audits by the Oklahoma State Department of Education (OKSDE), and all of them professed to be in complete compliance. When quizzed on how they know they are in compliance with SBR regarding some specific purchases, one gentleman replied, "The state department makes sure we are in compliance, and if not, they will let us know . . . no news is good news for me!" This sentiment surfaced over and over again in interviews. The sample was not worried about SBR because someone else is watching it for them.

The Oklahoma State Department of Education seems to be the key to SBR compliance in the state of Oklahoma. According to the participants, Title I funds are allocated through a reimbursement process, and most of them have learned to pre-approve purchases if any doubt exists as to their compliance with NCLB. A couple of superintendents even experienced rejected expenditures, but because the SDE monitors federal expenditures so closely, the ramifications were not costly. The underlying assumption is that the OKSDE possesses a list of scientifically research based products and checks purchases against that list. In any case, the superintendents in this study are not concerned with SBR beyond checking-the-box in most instances.

Many other concepts emerged in this round of questioning that also surfaced in the opening question; still others emerged which furthered understanding of some emerging concepts. The underlying tone related to this topic was frustration and resentment – a professional indignance that these professional men and women have

to be micro-managed in their purchasing. “These guys that make up these studies don’t have a clue in hell what it takes to run a school,” remarked a self-described *old-school* superintendent. That they are somehow limited in their choices to products or programs which may or may not match their local needs was an affront to them professionally. SBR carries an accusatory tone, because in their eyes, they have been verifying the efficacy of these products and programs all along, using their own brand of practitioner research, not a commercialized form of research slanted to make a product sound effective. These men and women do not trust SBR – research with a commercial or political agenda.

That being said, the OKSDE seems to have been an effective intermediary for them in this processes, minimizing the school-level burdens of SBR. Participants also agree that schools should be accountable for what they purchase, but they want the freedom to choose what they see as best for their schools. “Let me do it. Get outta my way. Give me the money and let me decide how to make things happen.” They believe, also, that with choice comes accountability, and they are willing to be held accountable for the outcomes. With that in mind, it seems that the OKSDE has allowed them to build a case for some of those purchases that were not initially considered research-based. They (and the OKSDE at times) are relying on that local evidence, on the people in the classrooms, to decide what is best for the schools, not on a packaged product and “so-called” research.

Table 5: Practicing and Purchasing

Question Two: Practice and Purchasing Emerging Concepts and Ideas
Vendors provide SBR.
People drive purchasing.
Most funds used in salaries, not in programs.
Check-the-box = SBR Compliance.
SBR products cost more.
Ambivalence -- not a concern.
SBR not a priority.
If I have to buy it. . .
Local needs and evidence trump SBR.
SBR may not apply to local population.
Generalizeability.
Presumption of compliance.
Professional resentment.
SBR does not equal evidence.
SBR created more savvy consumers.
SBR's accusative tone.
Use of consultants?
SBR process subjective.
SBR process suspicious.
OKSDE = Intermediary SBR
Accountability is welcomed, if reasonable.

Participants' Understanding of SBR Ties to Funding

As one superintendent put it when asked to describe how SBR affects funding, "I don't know how funding is tied to that." Even though this gentleman understood the SBR requirement regarding federal funds, there was an initial disconnect when asked this question. The implication is that *SBR is supposed to effect funding.* In reality, SBR is not an issue for these rural Oklahoma

superintendents. Primarily, this is due to the OKSDE acting as an intermediary for SBR. Because the OKSDE closely monitors spending of federal dollars through a reimbursement system, the chances of financial penalties to these schools has been effectively eliminated. Within the current system in Oklahoma, a superintendent would be almost negligent to spend any significant federal funds without first clearing it with the OKSDE. Superintendents did discuss incidents wherein purchases were denied for various reasons, but these were inconsequential; they pre-approve substantial purchases beforehand. Anything less could wreck their entire budget.

Another reason that SBR has not impacted funding in the eyes of these superintendents is that the majority of their federal money is invested in personnel. There just simply isn't any money left over after hiring people. Without exception, these superintendents value people over products or programs. The professional educator or paraprofessional in the classroom working with students on a daily basis impacts learning, not products or programs. One participant explained it this way, "I think that the lowest student teacher and employee student ratio that I have is the best use of federal funds. So, I use almost all of it for salaries." Another said, "We only buy what we have to buy (to meet Title I obligations); most of my money goes to staff." Initially, it seemed that Title funds were invested in salaries out of necessity. Instead, these superintendents choose to invest in people.

During the interview process, this topic was one which achieved saturation very quickly. Essentially, they understood how SBR effects funding, *in theory*, but

they had never experienced much of an impact *in reality*. That was what a participant meant when he said, “It doesn’t have anything to do with our funding.” SBR just does not seem to be a factor in schools regarding funding. The only exception to this is grants; most grants require a strong tie to research based practices.

Table 6: Ties to Funding

Question Three: Ties to Funding Emerging Concepts and Ideas
Purchases have been denied without much impact.
Potential for repayment or denial does exist.
OKSDE excellent watchdog. Protects schools.
OKSDE = No fear of repayment.
Funding ramifications not a consideration.
We only buy what we have to buy.
Most funding pays salaries = faith in people.
Burden on resources.
SBR = Bureaucratic Effort/Political Agenda
Drain of time negates benefit.
SBR holds potential for consequences.
Potential Exists for Real Enforcement
Ambivalence toward SBR.
SBR not a priority.
SBR eliminates good choices.
Consultants used as safeguard.
Superintendent responsible for SBR.
Check-the-box, then move on.

They did express frustration with SBR as being a drain on time and resources. But, considering that SBR compliance was expressed mainly as an afterthought, I concluded that this concern was more of a concern regarding NCLB overall. Several superintendents expressed a fear of the potential for SBR to affect

funding in the future, a fear of true enforcement which could limit schools choices. This was not expressed as a pervasive fear, however. The general consensus was that SBR was no more important than checking-the-box and getting it out of the way so they could get down to the business of running their schools.

Products and Programs Considered Research-Based

One must understand that the rural Oklahoma superintendent bears the burden of administrating an entire district, a burden which would be shared among several other administrators in a larger district. At best, they usually have the help of an elementary principal and a secondary principal. Several of these men and women served as both superintendent and principal at one level. One superintendent was PK-12 principal as well. This is necessary to keep in mind when looking at their handling of this topic. The initial response was almost always full of apprehension when asked to list products or programs at use in their district which they consider supported by SBR. " I can't think of any"; "Not off the top of my head", and "None come to mind" were all responses which surfaced on various occasions.

As several of them explained, they are so wrapped up in finances, building problems, and personnel issues that they could not produce such a list. They relied on their principals and staff to make those decisions. Once the initial shock wore off, however; they all managed to cite several programs and products in use in their district which they assumed were research-based (Table 8). Many of these products were mentioned repeatedly. One product, Accelerated Reader, seemed to be in use at every single school. Among schools in the northwestern portion of Oklahoma, a

program called Comprehend Pro seemed to have been implemented widely. Of course, a few of the participants readily ticked off a list of products and programs in their school. One even had his Title I audit folder on his desk. Overall, however, they needed a moment to switch their thoughts toward specific programs.

Technology, professional development, textbooks, and testing products were mentioned generically as being supported by SBR. One superintendent tied SBR and NCLB to the testing and textbook companies: "Follow the money," she said, firmly believing that many of the mandates were driven by commercial and political considerations. Technology, on the other hand, was simply accepted as research-based without any question, as was professional development.

More often than not, the SBR status of products was viewed with skepticism. Most were convinced that the SBR mandate increases costs of products because of the added expense to the companies of commissioning research. They had no doubt, either, that those costs were passed indirectly on to the schools. Neither did they doubt that SBR was often used purposely as an excuse to inflate products' costs across-the-board. In their collective mind, SBR makes educational products more expensive, creating even more of a burden on schools.

Perhaps this also is why *trust in people* resurfaced strongly as a central concept in this section. Although they could list products and programs, their faith was in the teachers, the local expert in the classroom. No fads or bells-and-whistles could replace the impact of professional educators. And this reliance on professional educators is evident on another front as well, as evidenced by the repeating list of

products at use by these superintendents. Apparently, they talk to each other to determine what products and programs are effective – the key element of their own personal brand of practitioner research. This theme began to develop more and more in other areas, as well. Reliance on people is the cornerstone of these superintendents' practice.

Table 7: Products and Programs Related Ideas

Question Four: Products and Programs Used Emerging Concepts and Ideas
SBR -- 100% Vendor Provided
Teacher input valued more.
Professional network valued more.
Technology generally considered SBR.
Professional Development = SBR.
Pride in local professionalism/expertise.
Textbook companies too commercialized.
SBR increases product costs.
SBR expensive to companies.
SBR expenses passed on to schools.
State-Adopted Textbooks Assumed to be SBR
Tests considered SBR.
Salaries.
Curriculum choices = Local issue
Bells, Whistles, Fads,
Unable to recall schools' programs.

Products and programs have their place, too. Table 8 contains a list of the products and programs mentioned by the participating superintendents as being research based. In order to determine if the products did meet SBR guidelines, I compared the list with the What Works Clearinghouse (WWC), a website created as a resource for educators in determining which products and programs are

scientifically research-based (United States Department of Education, 2008). Only two of the twenty-seven educational products or programs cited by the superintendents as being supported by SBR actually made it to the WWC list of research-based products, and both had mixed results.

Accelerated Reader (AR) was listed as having a "potentially positive effect" or "small extent of evidence" (United States Department of Education, 2008) in the curriculum area of Beginning Reading. AR was, however, found to have "no studies meeting WWC standards" in the area of English Language Learners (ELL). Interestingly enough, the doctoral student in the group specifically questioned how AR could be proven to affect reading instruction, due to its format of simply providing a quiz over a book that has been read. She had visited WWC and knew that AR was research-based, but still questioned those results. Accelerated Reader was the most often mentioned product in this study. No one indicated its use for ELL instruction.

Saxon Math was the only other product which was listed by WWC as research-based, again with mixed results. One superintendent praised it; one condemned it. In the area of Middle School Math, it rated as having "evidence of inconsistent effects" with a "medium to large extent of evidence" (United States Department of Education, 2008). Nevertheless, in the area of Elementary School Math, Saxon was deemed to have "no discernable effects" (United States Department of Education, 2008). It was not clear what version of Saxon Math was in use.

Table 8: What Works Status of Chosen Products and Programs

Products and Programs Considered Scientifically Research Based	What Works Clearinghouse Status
Accelerated Math	*No studies meeting WWC standards.*
Accelerated Reader, Beginning Reading	*Potentially Small Effect*
Accelerated Reader, ELL	*No studies meeting WWC standards.*
Alpha Plus	Not listed on WWC.
Bear Testing	Not listed on WWC.
Buckle Down	Not listed on WWC.
Classworks	Not listed on WWC.
Compass Learning	*No studies meeting WWC standards.*
Comprehend Pro	Not listed on WWC.
Dibles Testing	Not listed on WWC.
Dogs Against Drugs	Not listed on WWC.
Education City	Not listed on WWC.
Explore Test	Not listed on WWC.
Math Counts	Not listed on WWC.
Northwest Evaluations Association Testing	Not listed on WWC.
PLAN Test	Not listed on WWC.
Promethean Boards	Not listed on WWC.
PSAT Test	Not listed on WWC.
Reading Counts	Not listed on WWC.
Reading Plus	Not listed on WWC.
Renaissance Learning Star Math	*No studies meeting WWC standards.*
Renaissance Learning Star Reading	Not listed on WWC.
Saxon Math, Elementary Math	*No studies meeting WWC standards.*
Saxon Math, Middle School Math	*Inconsistent Effects.*
Shirley English	Not listed on WWC.
Smart Boards	Not listed on WWC.
Twitter	Not listed on WWC.
Voice Threads	Not listed on WWC.
Woodcock-Johnson Testing	Not listed on WWC.

Two other products – Renaissance Learning Star Math and Compass Learning – were listed in the WWC list of products which they declined to review altogether, citing that they had "no studies meeting WWC standards" (United States Department of Education, 2008). None of the remaining products could be found by me on the WWC website at all.

Processes and Resources for Determining SBR Status

Discussion of these two topics could not be separated during the interviews because they were so naturally related. One led to another so well that the questions melded into a single topic very early on. Saturation occurred very early on regarding SBR, but this question yielded significant insight into rural superintendents' decision-making processes which will be discussed at length in Chapter Five.

The process for determining the SBR status of products or programs was the central issue to the entire research project. Not surprisingly, this question yielded some interesting results and marked a dénouement for me: SBR is not real evidence, according to these practitioners. Two distinct views of research exist – that of researchers and that of practitioners.

Most of the information uncovered during this section did not pertain to SBR but rather to their own practitioner based style of research. With the dichotomous view on research existing surrounding this issue, it is important to note that SBR is not considered to be real research to these practitioners, which is why SBR compliance is not an issue. If using Title funds, SBR is a part of the process, just

like filling out the purchase order, but it is not a factor in deciding what to buy. That process involves a special practitioner-based research which is very complicated, very reliable, and very automatic (as will be discussed in chapter 5) – but is not related to SBR at all. Superintendents make decisions through this research practice which they consider as real, using a variety of sources. Scientifically based research does not affect their decision-making process much at all. They do not actively verify the SBR status of products or programs – they operate on the assumption that the OKSDE or vendors have done it for them.

I had wrestled with some unapparent disconnect through the first half of the 20 interviews. When discussing SBR or research in general, the participants just would digress, always reverting to discussions about testing and politics and NLCB. At first, I determined it was a contempt for research but then decided that it was the concept of a hidden agenda behind SBR. What became evident was that SBR, and formal research in general, is not only considered to have a political and commercial agenda but it also is not seen as *real*. It is not real-world. It is ivory-tower, politicized and commercialized. "It's a joke," sums it up for most of the participants. It is much deeper and much more professionally grounded than contempt and distrust for SBR. They value evidence and having *all* of the evidence, and therein lies one of the biggest problems – a surety that SBR is not presenting the whole story.

The biggest piece of the story missing for the rural Oklahoma superintendent is the local piece of the story. An incredulousness exists when presented with "east-

coast" or "big-city" research. "I still believe that SBR, to the perception of most, really isn't as important as my teachers having their own search of *all* information regardless of whether it met a certain criteria," explains one superintendent who sees educators as being capable of taking all information into account before making a decision. Research is readily seen as having a role in that process, but local evidence and circumstances and context must be considered as well. The community characteristics, local academic measurements, and teacher strengths/weaknesses matter, too. The arrogant presumption, in their eyes, behind NCLB and the SBR mandate is that an officially sanctioned answer exists.

Each of these professionals was willing to admit to the value of SBR, but each of them felt professionally violated by the supposition that a researcher or that a bureaucrat or that *anyone* could dictate what is best for any school anywhere without understanding the local context: "For the most part, I feel invaded by NCLB," is how one superintendent explains it, expressing a usurpation of local expertise in favor of *them – the vague, suspicious unknown agendas driving SBR and NCLB.* "That is why we have local control . . . or we used to," explains another participant. These men and women value local expertise most of all. SBR seems to de-value it most of all. The loss of local control is the most ire-raising aspect of NLCB and the most insulting aspect of SBR for these practitioners. SBR is an affront to local expertise.

Local expertise is the very foundation these men and women rely upon, with federal dollars and with every other aspect of education. In their eyes, SBR is an

assault on that: "I feel that what that's done is it's taken away our ability as local superintendents of local school districts of being able to select the materials and things that we feel are appropriate for our students." SBR is from somewhere else, "Obviously, research from the East Coast doesn't fit our situation. I trust my peers over so-called research." And so do the other participants in this study, as well, when they do their own, real research.

First, SBR compliance is very simple for these men and women: They ask the vendors for the research, place it in their files for evidence with the OKSDE, and buy what they wish to buy. For this type of documentation, the vendors are the only source of research. As one superintendent put it, "Other than the vendors telling me so, I wouldn't have any idea." And another when asked if he had any other resources besides vendors for SBR: "No, no I don't." Regarding NCLB and SBR compliance, all of that documentation is coming from the vendors themselves. "You trust the people who's telling you it's been researched, we don't go do the research on it, " explained one superintendent regarding verifying the SBR status of products. Another flatly said, "What the vendor tells us is generally what we use." SBR seems to be vendor-driven.

Vendors seem to drive SBR, even though the What Works Clearinghouse exists as a resource for complying with it. Of the 20 superintendents interviewed, only three had even heard of the What Works Clearinghouse. Of the three, only one could say that she had visited it with certainty, citing which product she had looked at (Accelerated Reader). The other two were vague about it; one claiming to have

visited it sometime in the past, and one just claiming to have heard about it but had never been there. Below are some quotes regarding the What Works Clearinghouse that capture the essence of the situation:

"The what?"

"What?"

"Say that again?"

"The what now?"

"No."

"What's that?"

"Never heard of it."

And upon hearing a brief explanation of the purpose of the WWC:

"Well, I'll be! Honestly, in all this time, I have not heard of that."

"I have actually gone to the website, right now (during the interview), and I am thinking: How have I not heard about that?"

"They haven't done a good job of getting that out, have they?"

"It sounds like a good idea; they just didn't tell us about it."

"Tell me when people have time to jump out here and do all of that."

So, without WWC and without much regard for vendor-produced SBR, how do these men and women verify the research-based status of a product or program? Generally speaking, they don't. "Everyone has the flag up . . . it's scientifically research-based!" remarked one superintendent. SBR is a given, a box to be checked, and nary an educational product is sold today which is not promoted as scientifically

research-based. As long as they have documentation (which is almost always provided through the vendor), the state department will accept it and they buy what they wish to buy. There is no further need for resources, research, nor effort. SBR is a given, a presumption. At best, lip-service is paid to SBR in order to spend money. Scientifically Based Research has become a formality.

Table 9: SBR Determination and Resources

Question Five: SBR Determination Emerging Concepts and Ideas
SBR = Check-the-Box
SBR = Political and Commercial Agenda
SBR Does not Account for Local Context
SBR = Loss of Local Control
Vendors are main SBR resource.
SBR is not real research.
Lip service to SBR.
SBR does not affect decisions.
SBR status assumed.
Burden on OKSDE and vendors.
Question Six: SBR Resources
What Works Clearinghouse
Oklahoma State Department of Education
Vendors provide SBR.

Impact of Research on Participants' Practice

The disconnect between research and practitioners became even more evident when exploring this topic. Discussion of research as an abstract related to NCLB was one thing; discussing research as it related to their day-to-day job duties was entirely different. Of the twenty participants, three actually expressed a reliance

on research for what they do. Only the doctoral student and former adjunct professor were very comfortable discussing research practices, and sources of information. The doctoral student was emphatic regarding how research has impacted her practice: “Hugely!” She asserted that research had impacted every aspect of her profession in very meaningful ways. The former adjunct professor described research as an action, not as something to do, not something to access. Research as a verb began to emerge as an integral concept throughout the study. For that superintendent, the ability to research ideas was the greatest impact on practice.

The remainder of the sample, however, had an entirely different reaction when asked how research has affected their practice as superintendents. “Of the decisions that I make running a school, very little of it is educationally research based,” explained one veteran superintendent. Another superintendent explained how “sewer pipes 101 or busses 101” just are not addressed through research. “It’s bullshit,” exclaimed another. These comments, however, express the sentiment toward SBR, research with an agenda – that sort of ivory tower attitude which dares to dictate what is best for schools, regardless of their context or situation. Again, the dichotomous view of research surfaced, and discussion of SBR was full of frustration and resentment.

I made a point to ask if any products’ research had ever impressed them or had ever changed how they did their job. Their reactions ranged from ambivalent to angry, but the perception of SBR is generally the same. In the eyes of these superintendents, commercially or politically influenced research produces *fads* or

gimmicks, cookie-cutter or canned programs that will go away eventually. They have seen the cycles and feel that SBR is just another of those cycles which will eventually disappear in light of something new. "It's another unfunded mandate that takes away time and resources from our kids," explained a participant who thinks it will go away when the new wears off, "It makes real good TV press." SBR and product-related research has no more meaning to their day-to-day job performance than does a stamp on an envelope – they use it when they have to. Discussion of what they see as real research, however was another issue altogether.

Without exception, the sample participants described themselves as being adept at *doing* research. Therein lies the impact of research in their lives – they have developed the ability and practice to consume large quantities of information, cut to the heart of the issue, and to make decisions based on their research. SBR does not factor into this process; people do, and professional associations do. Professional publications, some of which are even research-based factor in as well. Research, however, is a process that they employ on a daily basis when making decisions. That is how research has impacted their practice – it is an action they perform regularly. This approach to research will be discussed in Chapter Five.

Most were quick to identify the classroom-level impact of research, however. Reading instruction, staff development, and technology are three areas which surfaced repeatedly regarding research-based classroom practices. Overall, teachers are more aware of research-based practices, according to the sample, and better at incorporating those practices into their classrooms. But again, research-

based practices only have value if they fit within the local context and within the practice of the classroom teachers. In that regard, research-based concepts, ideas, and practices do have a place in these superintendents' daily practice. They see research as guiding instruction and learning whenever local context allows.

Table 10: Impact of Research on Practice

Question Seven: Impact of Research on Practice Emerging Concepts and Ideas
SBR is not evidence.
Evidence = Research.
Vendor Produced Research has no value.
Grain of salt, lip-service, gimmick.
Professional Development truly research-based.
Credibility associated with People.
Canned program, cookie-cutter, fad.
Personal research more valid.
Ambivalence to SBR.
Proof is in the outcome.
SBR does not account for local context.
SBR too open to interpretation/agendas.
Personal research can validate SBR.
Trusted source = biggest factor for validity.
Emphasis on critical thinking due to research focus
Reading instruction is research-based.
Research is an action, not a thing.

As the reality of two differing views of research emerged in the interviews, discussion of SBR versus real research became clearer. Research has impacted the practice of these rural Oklahoma school superintendents and the practice of their schools. SBR – as they perceive it – has not. "I still believe that SBR to the perception of most really isn't as important as my teachers having their own search

of *all* information regardless of whether it met a certain criteria." They make their decisions based on evidence, and that evidence must be grounded somehow to their context. In that regard, the superintendents consider themselves and their staffs as more critical thinkers and better consumers of information.

Impact of Training and Education to Address SBR

Since participants in this study were required to have at least five years of experience as administrators and NCLB was only in its seventh year of implementation, I had little expectation of discovering that the participants' university coursework addressed SBR or NCLB at all. It was important, however, to determine what training or preparation has been available to superintendents regarding Scientifically Based Research since the enactment of the No Child Left Behind Act.

The university experiences of these men and women did not prepare them to evaluate the SBR status of products or programs. While a few of them recalled elements of educational research coursework, just as many could not remember any coursework at all pertaining to research. Educational research classes brought out unpleasant memories for most of them. (One person remembers buying t-shirts to celebrate passing the course.) Overall, Research 101 was a confusing exercise, quickly forgotten, "That was a helluva a hard class, but I didn't really didn't gain much from it." Most did, however, admit to gaining some of the same benefits as outlined earlier in this chapter – better information analysis skills, a greater affinity

for evidence, and a better understanding of data. Few of them felt comfortable with formal research as a result of their college experiences, however.

Table 11: Professional Preparation

Question Eight: Professional SBR Preparation Emerging Concepts and Ideas
Educational research course a vague memory.
Professional preparation was practice based.
Professional organizations offer NCLB training.
Formal research = reading.
Educational research courses hard/ no lasting benefit.
Discussions on SBR are often discussions on NCLB.
Better able to analyze data.
SBR training not a priority.
Research focus creates greater vigilance.
New fads are old fads repackaged.
Respect for evidence/contempt for SBR.
Professional network is best resource.

The lack of training opportunities since NCLB came into effect is a serious concern. All of them were fairly quick to affirm that their staff had been trained or that trainings had been offered through the various state agencies and professional associations. “Everyone’s been trained,” assured one superintendent. Unfortunately, this was another instance of NCLB bleed-over. No SBR-specific training could be cited or recalled by any of the superintendents, even when pressed. Undoubtedly, there had been trainings or opportunities for training in NCLB, but nothing could be verified which was specifically related to SBR.

Among the participants in this study, no evidence could be uncovered to indicate that superintendents had received any training specific to SBR compliance

within their schools. None could be specifically cited for their staff or for themselves that had even been offered. Clearly, their university experiences had not addressed the situation, either. Not even the former adjunct professor and doctoral student could accurately explain the mandated SBR components, the narrow definition of research according to NCLB. Formal training in research and research-based practices seems to have been almost non-existent from a practical standpoint.

Participants' Understanding of Educational Research Fundamentals

If a suspicion existed that two realities of research exist in the world of education, this area of questioning certainly confirmed it. With that in mind, discussion in this chapter will center around formal research fundamentals and SBR components. (Specifics regarding their brand of practitioner research will be dealt with in Chapter 5.) The disconnect between practitioners and researchers widened in this section.

Regarding Scientifically Based Research, none of the participants knew the components as outlined by NCLB. Two participants truly understood formal research fundamentals, easily discussing quantitative research, qualitative research, data triangulation, and other topics. The remainder, however, were in the dark regarding SBR and formal research principles. Conversations quickly digressed into comments about NCLB and other matters. Very little discussion occurred surrounding research or SBR at all.

Certain principles of research did emerge worth noting. Although no one utilized the term, generalizeability is a shared concern among all of them. All

participants prided themselves on being good consumers of data and evidence. Overall, nothing new emerged from this section except a deepened understanding of the differences between formal research practices and practitioner-style of research.

Table 12: Understanding of Research Fundamentals

Question Nine: Understanding Research Fundamentals Emerging Concepts and Ideas
Generalizeability is key concept understood.
Formal research is equated with reading.
Formal research important if forced to do it.
Many do not recall educational research.
Ivory Tower
Ability to gather information.
Information processing skills.
Research builds affinity for data.
SBR neglects established methods/products.
Need to research the research.

Role of District Policies and/or Procedures Regarding SBR

From the practitioners' standpoint regarding NCLB and SBR, formulating policies and procedures specifically addressing research and research-based practices in simply impractical. One superintendent conjectured that such policies exist in larger districts where administrators have the luxury of being more specialized, but none of the twenty districts represented by this study contained any policy specifically addressing scientifically based research or research at all.

What was affirmed, however, was the existence of general compliance statements which state that the district will comply with all federal, state, and local laws. One superintendent said he adds "only what we have to have" to his policy

book. Such was the prevailing attitude among all of the participants. The faddish nature of SBR has a lot to do with this result. If SBR is a gimmick or a fad, then these experienced men and women see no reason to permanently lock their district policy to something that is politically and commercially driven. In the final analysis, pragmatism seems to have dictated this choice. No policies existed among these schools. None were seemingly needed.

Table 13: District Policies

Question Ten: District Policies **Emerging Concepts and Ideas**
Compliance statements are the norm.
Pragmatism a big factor.
Only what is required by law.
Reinforced low-impact nature of SBR.

SBR Compliance and Oversight

Oversight of SBR within or without the district could not be discussed separately from NCLB. Essentially, whoever was in charge of Title I or federal programs was also in charge of NCLB, and hence SBR. As experienced with other areas of this research, SBR is such a non-issue that discussion of it by itself was nearly impossible in some areas. Responses, therefore, were in regard to federal program oversight in general, not NLCB or SBR.

Within the districts, a broad range of people were responsible for Title I oversight, and that person was assumed to be paying attention to NCLB. In only two districts, the largest and the smallest, did the superintendent identify himself or herself as the person directly responsible for SBR compliance. A variety of other

people including building level administrators, teachers, office staff, and consultants oversaw SBR compliance in the remainder of the districts. No one indicated that SBR compliance was a serious concern within their district.

From the outside, consensus was more readily reached. The Oklahoma State Department of Education is the only agency watching this issue within these respective districts. During Title I audits, they have been known to ask for documentation of research. No one had ever experienced a loss of funds due to SBR non-compliance. Two were not allowed to spend money on something beforehand, however, that the OKSDE did not deem research-based. In both cases, the district produced evidence to support their choice and the OKSDE allowed them to make the purchase. It is not clear what type of evidence they produced; neither of the programs were listed anywhere on the What Works Clearinghouse. Most often, OKSDE oversight was in the form of financial oversight through required audits or through the Regional Accreditation Officer, who makes sure schools meet state guidelines.

Again, response was generally favorable in regard to the OKSDE as an overseer of NCLB, but that was not the case with federal programs in general. While SBR may have been minimized by the OKSDE, financial issues are more serious in the eyes of the superintendents in the study. One superintendent cited an instance of a federal audit, but it was financial in nature and not related to SBR.

This topic was difficult to explore for many reasons. First, the results had already indicated that no one was paying much attention to SBR in these districts.

Secondly, it was difficult to separate SBR from NCLB or Title programs. In the final analysis, no uniform process or position surfaced within the districts. The only common denominator was the Oklahoma State Department of Education.

Table 14: SBR Oversight

Questions Eleven and Twelve: SBR Oversight Emerging Concepts and Ideas
Within the district:
Superintendent
Principals
Consultant
Counselor
Title I Teacher
Special Education Director
Federal Programs Director
Committee
Outside Agency:
Oklahoma State Department of Education
Financial Auditor

Impact of SBR on Student Learning

This interview process contained within it many different tones and moods that ebbed and flowed depending upon the topic or the personality involved. The greatest bouts of passion surfaced when talking about learning – the men and women involved in this study are passionate about learning and about ensuring that their children learn as much as possible. A wide range of emotions surfaced, ranging from anger at perceived NCLB inequalities to elation at the quality of instruction within their districts. The information truly flowed regarding this topic. They were in their element.

And as they mentally surveyed their districts, every single superintendent agreed that NCLB and/or SBR has increased learning in one way or another, some begrudgingly, but they all found something that is better. It was still impossible at times to discern if the interviewees were talking about NCLB or SBR, but it was very clear at other times.

Remarkably enough, perceptions of No Child Left Behind were generally positive regarding its impact on learning. Superintendents have been able to use it as leverage, as a scapegoat for doing some things that they already saw as important. By claiming it was an NLCB requirement, staff and communities acquiesce much sooner: "Whether it is right or wrong, we have used it as a leverage, to say 'This is federal, we have no choice but to do these things.' Sometimes that's the only way to motivate them." The participants also welcomed the accountability, citing it as a factor in increasing test scores, and admitting that they are doing things for kids that they were not doing before NCLB. Overall, the impression was that NCLB has - increased learning.

There were some criticisms of NCLB, as well. A chief concern was that the added burdens of NCLB have taken away precious teaching and learning time. "Even in a small school," explained a participant, "it's a full-time job." NCLB is viewed as an unfunded mandate; therefore, many lamented the increased paperwork. The loss of local control and educational choice was another complaint that surfaced periodically. NCLB is seen as a cookie-cutter approach to education, driven by big

cities, and it fails to account for rural culture and context. NCLB is definitely seen as an erosion of local control.

Many also questioned the implication of the title as well. “Another thing that ticks me off about NCLB,” commented one, “It’s a great line, No Child Left Behind, but the kids who get left behind are the gifted kids and the normal kids who are doing just fine.” Another superintendent complained for the opposite reason – NCLB punishes the low kids by identifying them as special needs and still requiring too much. Either way, concerns about equity abounded in many ways. The superintendents do not think that NCLB is entirely fair or equitable to schools or children. Generally, they expressed frustration at the top-down, us-versus-them nature of NCLB. NCLB seems to offer no leeway for anyone. The underlying presumption seems to be that all kids are the same everywhere and need the same things. These superintendents do not agree.

Regarding SBR, they were quick to agree that a focus on research (more accurately, evidence and data) has improved learning in many ways. Primarily, they credit the focus on learning itself as an outcome of research emphasis. For example, an emphasis on critical thinking and authentic instruction are credited to research. Teachers are also believed to be better as a result of more research-based professional development initiatives. As a result, teachers are more aware of options and choices. Their teaching toolkit is more extensive, and they have a deeper understanding of their pedagogy.

Table 15: SBR Impact on Learning

Question Thirteen: Impact on Student Learning Emerging Concepts and Ideas
Test Scores have risen -- NCLB.
Resentment for children left behind.
SBR by itself -- NO
Staff has made difference -- not SBR programs.
Outsiders/big city SBR -- no impact.
Increased awareness of research.
Professionally indignant -- SBR.
Focus on learning.
Focus on data and evidence.
Gives teachers more confidence -- SBR.
SBR valuable if it fits locally.
Better understanding of practice.
Depends entirely on teacher in the classroom.
Increased focus on some areas.
More watchful.
SBR products not better.
SBR hurts small companies.
SBR limits choices.
Critical-thinking skills.
Data-driven decision-making.
Accountability is a good thing.
Accountability needs to be uniform.
Evidence and Data -- Not SBR.
Educators can decide what works.
Teacher are deciding factor.
SBR slows down process.
Increased staff collaboration.
NCLB good motivator.
NCLB serves as leverage for difficult items.

Complaints and concerns regarding SBR which surfaced are nothing new to this chapter. SBR is seen as the imposition of *them*, outsiders forcing their faddish

ideas regarding education on local classrooms. Few seem to believe that the use of SBR products or programs has helped, however. None believe they are inherently better than other products. And finally, the concept of generalizeability surfaced again. These men and women may not be researchers, but they do understand that results in a particular setting, with a particular set of kids, under a particular teacher – may not translate to their district. As one said, "What works here is not going to work for them." With that in mind, they feel limited in educational choices. SBR limits product choice and educational choice for kids. That is not a positive result for schools, in their eyes.

Summary and Conclusions

Regardless of the intent of the SBR mandate, the breadth and scope of its impact has been limited by numerous factors. Weightier and more publicized NCLB mandates have become a priority for rural Oklahoma schools, so SBR is simply not important. The perception of SBR as being driven by non-educational agendas has impacted its effectiveness as well as a lack of professional preparation or training for educators. The general consensus was fairly clear to me: SBR has been marginalized.

Chapter Five

Introduction

The goals of Grounded Theory research are to generate theory and to develop recommendations or a plans of action, and to recommend future research (Glaser, 1978, 1998; Glaser & Strauss, 1967a). This section presents a discussion of the results as outlined in Chapter Four, my conclusions, recommendations, and theory generated as a result of the research.

Discussion

The NCLB and SBR Equivocation

Given the controversial nature of the No Child Left Behind Act, it is important to note that discussion of SBR often amounted to a discussion of NCLB in the minds of the participants. Most often I could mark a distinction; other times he could not. Although this study is not concerned with NCLB as a whole, separating it from the discussions was nearly impossible, and certain of the concepts and ideas which were clearly related to the No Child Left Behind were also related to Scientifically Based Research. Such association is common with NCLB and other comprehensive reform efforts (Fowler, 2008; Ryan, 2007) and was not surprising to me. Certain of these underlying biases and dissatisfactions in general were true for both NCLB and SBR and will be addressed first.

Unnecessarily Burdensome

Both SBR and NCLB are seen unnecessarily burdensome. The extra paperwork, added bureaucracy, and micromanaging accountability frustrate school

leaders, a common complaint of NCLB and comprehensive reform efforts (Fowler, 2008; Fusarelli, 2007). Most admit that the implementation process has been getting steadily better, but they would also like to see more reasonable approaches to all of NCLB. The added stress of NCLB due to its inflexibility has been supported by research (Daly, 2009) and adds credence to the underlying dissatisfaction with the law uncovered in this study. Despite this, these superintendents do agree that some good has resulted from NCLB. It has forced schools to pay attention to previously neglected areas and placed some long-needed accountability measures in public education, but they are also concerned that the unfunded burdens of NCLB components on schools negate any benefits.

Professional Indignation Regarding NCLB

While accountability is seen as necessary, even among the schools represented in this study, a palpable sense of professional indignation pervades any discussion regarding NCLB. NCLB (and SBR as well) convey a blatantly accusatory tone to rural Oklahoma superintendents, who pride themselves and their staffs as having done excellent jobs under very difficult circumstances. Even with this sense of insult, most of them would admit that students have been positively impacted due to some aspect of NCLB or another.

Good Intentions, Poor Implementation

The general consensus regarding NCLB is that it is a bill of good intentions and poor implementation. Both sides of the political aisle seem to place responsibility for the bill at the opposition's feet, and both sides of the political aisle

seem to share the same concerns and recommendations for making things better (Ryan, 2007). In the mind of this researcher, NCLB is here to stay – as is SBR – in one form or another. The erosion of local control may be key to its longevity or to its downfall.

Scientifically Based Research and the Assault on Local Control

For rural Oklahoma superintendents, SBR is a pivotal component in an unprecedented federalization of education, a sentiment supported in research (Hursh, 2007). Rural Oklahoma superintendents operate with a deep professional pride in themselves, their schools, and their region. They understand the geographical implications to their schools and have faith that local leaders can best address those issues (Tate IV, 2008). That faith is grounded in local expertise, the educators in the classrooms and the principals in charge of the schools. Non-local research is sometimes held suspect (Melnick & Henk, 2006). Local people are the deciding factor for them, not research conducted in some "big city" or by "so-called" researchers who do not understand local contexts.

The reliance on local expertise indicates that the educators working in these rural schools are not only professionally trained but have also developed a keen understanding of the special circumstances, cultural climates, and needs of their rural schools. They understand, in-line with research, that educational needs and opportunities can be limited or increased by local context (Tate IV, 2008). While admittedly not researchers, the superintendents of rural Oklahoma do understand the fundamental concept of *generalizeability*, which has also arisen as a serious issue

relating to recent research regarding products and programs (Harris, 2009). The SBR presented to them to support a product's efficacy may be entirely meaningless in their schools, not a match to local contexts. Curriculum is a local issue, and curriculum decisions are best made by those local experts. SBR limits choices, in the mind of these men and women. It limits their schools based on some "outsiders" opinion of what is best. Therefore, SBR is seen by the participants as a primary weapon in the assault on local control. It undermines the local expertise in rural schools and usurps local choice.

Agendas Driving SBR

It is this apparent infringement on local control which leads these men and women to conclude that SBR is guided by more than research and more than science. SBR is driven by an agenda. The underlying presumption of the SBR mandate, to rural Oklahoma superintendents, points to hidden agendas. The idea that rural Oklahoma educators are no longer capable of choosing educational products or programs seems ludicrous on many levels to rural superintendents. There must be a motive behind it all.

Political Agenda of SBR

Driving this assault on local control is a political agenda. Both democrats and republicans share blame for it and are accused of driving it (Ryan, 2007). In either case, SBR is seen as a political effort to control what is being taught in schools, a perception which is accepted among researchers as well (Hursh, 2007). All classrooms will be the same. All teachers will teach the same. All students will

learn the same. Unfortunately, the superintendents in this study bristle at the idea of having their curriculum and educational options dictated to them from Washington politicians who may have no educational training whatsoever. This falls within the overall suspicion of NCLB as well (Hess, 2008), which is seen as precipitating the failure of schools and opening the door to vouchers and greater federal control. Either way, many motives behind SBR are clearly political, not educational or scientific, according to the participants.

Commercial Agenda of SBR

More insulting than the political nature of SBR, however, is the commercial agenda. This commercial relationship is a prime concern among rural Oklahoma school superintendents and the general research community as well (Burch, Stienberg, & Donovan, 2007; Oppenheimer, 2007; Paley, 2007). It is also a prime reason for the widespread ambivalence toward scientifically based research and the mandate in general. Vendors provide virtually all of the research documentation for their own products. This, in turn, forms the basis for the schools' SBR documentation for the OKSDE. *Scientifically Research-Based* has become an ad-line, a slick marketing gimmick, no more. None of the superintendents in this study put much faith at all in the vendor-provided research. They accept it as a quick form of documentation, something they can use to justify their spending to the OKSDE – which seems to accept it without question. These superintendents have decided that SBR is little more than a commercial product, designed to support the claims of the company brandishing it.

SBR Marginalized

For these reasons, among rural Oklahoma superintendents, SBR is a non-issue. Ambivalence is the predominant reaction to the mandate. SBR has become a box-to-be-checked. It is not a priority with these professionals because it is not a priority with the federal government or with the OKSDE. SBR is simply dwarfed by larger issues of NCLB such as high-stakes testing, Adequate Yearly Progress, and Highly Qualified Teachers (Fowler, 2008; Ginsberg & Lyche, 2008; Manna, 2006). The data suggest that no one is paying serious attention to SBR because it is not a priority.

What Works Clearinghouse

Evidence of this can be seen in the federal government's main resource for SBR, the What Works Clearinghouse, as well. WWC has endured some recent criticism (Harris, 2009; Slavin, 2008), but in the eyes of practitioners, it appears to be a frozen and ineffective entity, judging by the aid it offered regarding the 27 educational products cited by this study's participants as research-based. Most of the products seem to be nationally available, but only two of the products were listed as being supported by SBR -- with contradicting results. This suggests that SBR may not be a priority to the federal government, either. Only five educational products or programs for elementary math made it through the WWC process successfully (United States Department of Education, 2009). This would imply that those are the only products purchased with federal educational funds, but that is apparently not the case. Either *What Works* is not working or SBR is not working.

The Oklahoma State Department of Education as an Intermediary

The Oklahoma State Department of Education deserves credit for filling the void and acting as an intermediary for Oklahoma schools regarding SBR. The OKSDE has helped SBR become a manageable issue for schools. This is apparently the intent of NLCB framers and the norm across the nation, too (Burch, Stienberg, & Donovan, 2007). In light of the very limited choices offered as SBR-supported by the WWC, the OKSDE has acted as a rational agent for Oklahoma schools in several ways. First, the OKSDE prevents schools from making unqualified purchases. Secondly, the OKSDE has allowed schools to build the SBR case for purchases – even if that proof has come from the vendors. In effect, the OKSDE has eliminated the likelihood of financial ramifications by making SBR a manageable nuisance, allowing schools to check-the-box for compliance and to purchase what they need for their schools.

SBR: A Box-to-be-Checked

As a result of all this, SBR compliance is a very simple issue for Oklahoma schools as represented by this sample. The data suggest that SBR is provided by all vendors, as much a part of the product as the packaging itself. Educators choose their products and programs with SBR as an afterthought; it does not drive purchasing. There seems to be only two exceptions to this rule: First, when schools are required to purchase a product or program due to state or federal mandates; they purchase that product because the product is already approved as SBR. Second, if

schools invest in something that is not pre-packaged, they have the opportunity to build the SBR case for the purchase. SBR is a minor hurdle in most cases.

By-Products of SBR

Data from this study suggest that the focus on research, however, has impacted public schools in many ways. It is not clear whether this is as a result of SBR or in conjunction with SBR, but research has become more important to educators and an important part of their practice. The methodology is not the SBR-brand of research; it is more of a mindset which values evidence and data in various forms. With this in mind, teachers and administrators alike are more research-driven than ever before (Luo, 2008). The data suggest that teachers are more aware of their pedagogy, and students are receiving instruction that is supported by research. All educators seem to be more savvy consumers of research, better at analyzing data, and better at applying researched principles into their practice, too (Fusarelli, 2008; Honig & Coburn, 2008; Whitcomb & Borko, 2007). As a result of all of this, a hybrid form of SBR has evolved in schools. Operating within this practitioner style of research, educators have become very adept at performing research.

Educator's Product Research

Although educators are not using Scientifically Based Research as an integral part of their decision-making process, the data suggest that they have become experts at performing their own brand of product research. Research has touched on educational product marketing issues (Burch, Stienberg, & Donovan, 2007; Fusarelli, 2007), but these practitioners' answer to SBR may be new. This

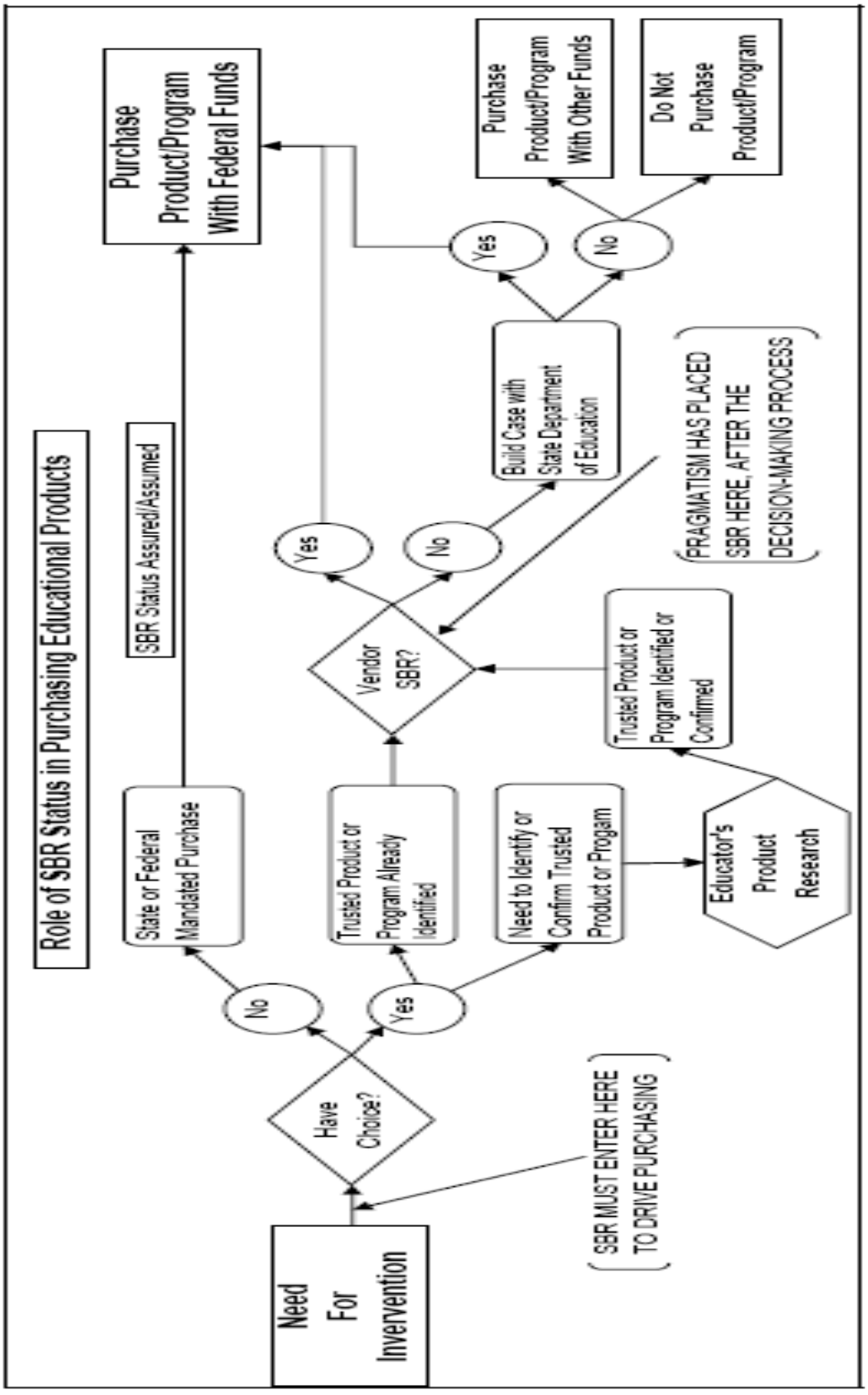
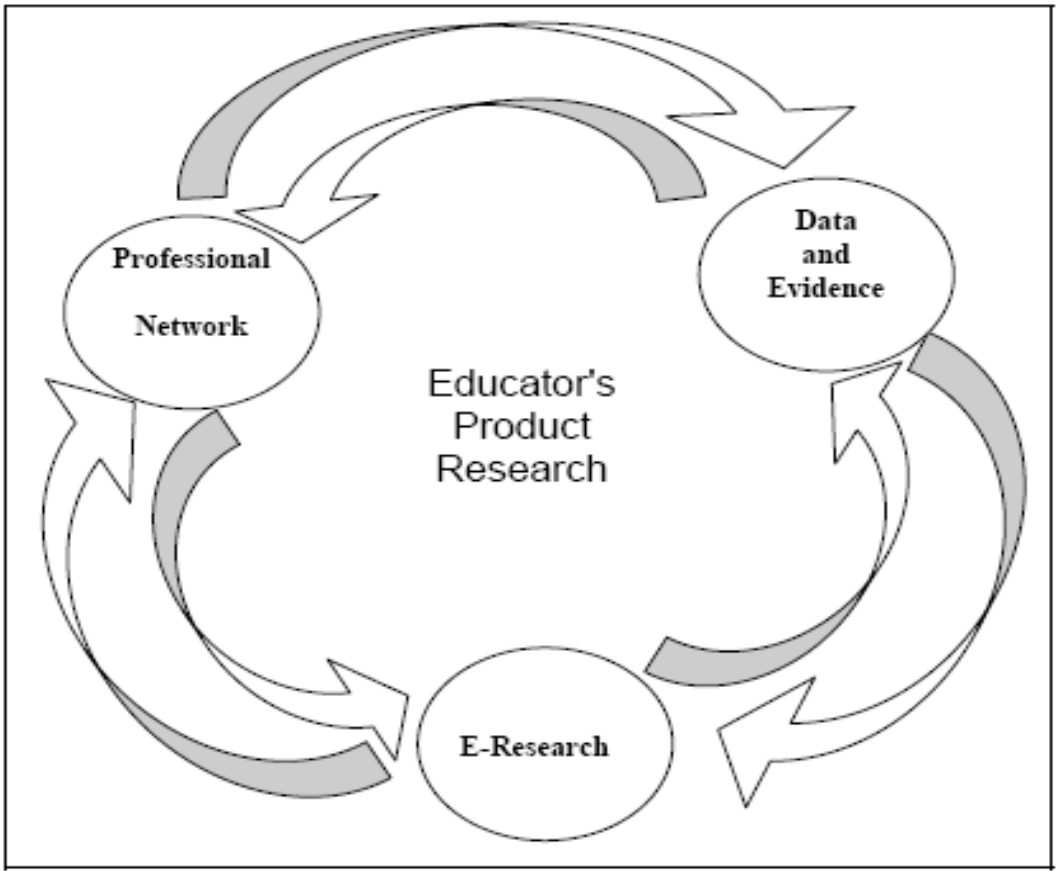


Illustration 6: Process for Determining SBR Status

Educator's Product Research (EPR) is very dynamic, holistic, and instinctual; it is something that rural Oklahoma superintendents do on a regular basis when implementing products or programs into their schools. It has become an automatic component of their practice and part of their purchasing habits as well. It is not SBR; but that does not automatically mean it is not scientific.

Educator's Product Research operates on the principle of data triangulation – grounded in the conviction that they need various types of evidence to make solid, professional decisions about which products or programs to incorporate into their schools. The key characteristic of the sources for this evidence is that they are perceived as trusted sources (Daly, 2009; Gubbins & MacCurtain, 2008; Melnick & Henk, 2006; Reid, Smith, & Michael, 2008). Educators feel that they can rely on these sources because they are real-world and they are either agenda-free or upfront with their agendas. Most importantly, EPR is an unscripted action, not a passive absorption of information or a trip to the library. EPR has three distinct components which are interchangeable and non-linear, often occurring simultaneously and in conjunction with the other components. (Illustration 6) These components were uniform across the sample.

Illustration 7: Educator's Product Research



EPR Relies on a Professional Network

When attempting to determine if an educational product or program will be appropriate for their students, rural Oklahoma superintendents rely most on their professional network. This component of superintendents' decision-making process is nothing new (Cheuk, 2007; Honig & Coburn, 2008) and contains many of the components of Social Network Perspective (Gubbins & MacCurtain, 2008; Reid, Smith, & Michael, 2008; Smångs, 2006; Song & Miskel, 2005). It is simply a process of asking people for their professional opinion regarding the educational program. Superintendents in neighboring or similar districts who have had

experience with the program are generally the first step in the network. They can either offer insight or refer them to someone else who can be of better service. Those people are almost always educators – principals or teachers who are intimate with the program in question. An equally important step is the local experts within their own districts. Teachers, directors, and principals also comprise this group. Few decisions are made successfully without the local educators' input. Also included in the professional network are officials within the OKSDE or statewide professional organizations for school administrators or curriculum. This stage of EPR offers practitioners some opinions regarding the program, but it functions more as a portal to specific information required in stage two.

EPR Relies on Data and Evidence

The second component of EPR in determining the appropriateness of a product or program is the demand for data and evidence. The vendor-provided research can provide a portion of this evidence and data, but EPR demands local or contextual evidence. Much of this evidence is also obtained through the professional network as described above, but this component of EPR requires more than testimonials. Test scores and other measurable results are the key types of data and evidence sought. Testimonials have their place here as well, but specific details are important such as how the students reacted, how easy the program was to implement, or how helpful the vendor was in the process. Practitioners prize data and evidence which they consider reliable (Bulterman-Bos, 2008), and most often, the data are connected to or provided through a trusted professional (Daly, 2009;

Gubbins & MacCurtain, 2008; Melnick & Henk, 2006; Reid, Smith, & Michael, 2008). The vendor-provided research could build an air-tight case for a program's effectiveness, but practitioners will not care if a trusted teacher or principal says the kids found it difficult to use. Improved student achievement based on test scores seems to be the most convincing evidence in this stage.

EPR Relies on E-Research

The historically unprecedented availability of information is a key factor in EPR. It is, potentially, the key component which makes EPR an evolution or hybrid of previously researched decision-making processes. Presumably, practitioners have utilized information resources in the past such as trade journals, reference books, and other information resources as a component of their research. In the past they have proven open to research (Honig & Coburn, 2008; Pierre, 2006), and they still are, but they access research almost exclusively through the internet in EPR. Information technology has transformed product research. The internet is the backbone of this process. Through it, practitioners can access virtually anything to help them determine the efficacy of a particular educational product or program -- vendor websites, trade websites, organizational websites, even through on-line references such as dictionaries. Other sources of information have all but disappeared from use.

EPR as a Phenomenon

EPR may, in fact, be a unique phenomenon which has emerged in the wake of SBR, possibly even as a replacement for SBR. The recent trend of educational

decisions and practices being more evidence and data-driven has certainly contributed to the phenomenon as well. Prior to the enactment of SBR, school leaders may not have had to research products with such care. Many of the components presented the literature regarding superintendents' decision-making processes are present, particularly the reliance on a professional network and trusted resources (Gubbins & MacCurtain, 2008; Smångs, 2006; Smeaton & Waters, 2008). The *sole* reliance on E-resources for fact-checking and non-local data collection may be a paradigm shift for school administrators and may have implications for educational marketing. It has apparently happened for rural Oklahoma superintendents.

Although SBR may not be driving purchasing, the data do suggest that educators are more savvy consumers and more careful in their purchasing. If the goal of NCLB in enacting SBR was to ensure that educators make thoughtful, careful decisions regarding the purchasing of products and programs for their schools, then SBR has had some impact. School leaders do seem to have developed a type of research to support the efficacy of the products they purchase. If the goal, however, was to adhere to SBR's strict guidelines and to the What Works Clearinghouse's approved products, then SBR has been an utter failure. The data suggest the former: school leaders are researching products and programs fairly thoroughly, just not by SBR standards. I do not have a clear picture of EPR in many ways, but I am confident regarding certain aspects of the EPR machine.

Educators' Product Research in Action

Although I was surprised by the emergence of Educator's Product Research, the methodology employed by rural Oklahoma superintendents seems very practical and based on common-sense. It is very important to note that EPR is entirely separate and distinct from the SBR mandate. EPR is an important process in the purchasing products or programs with federal dollars, but SBR not an important factor in Educator's Product Research. The following description of EPR in action is a generalization of the process; EPR is a flexible and intuitive process which often does not start as the result of a conscious decision. In many cases, EPR is such a seamless dynamo that participants may not even be aware of the deliberations which occur throughout the process. Superintendents seem to automatically employ EPR when purchasing products under a demand for evidence.

Need for Intervention: Two Sources

The first step in Educator's Product Research is the emergence of a need, which occurs through two primary avenues: educational deficiency or educational mandate. An educational deficiency is most often identified by some sort of educational assessment such as a standardized test or other evaluation which stands as evidence of poor academic performance. In the state of Oklahoma, the end-of-instruction exams or benchmark tests are examples of such reports which may convince an educator of the need for an intervention. Other student work products such as grades and projects may identify a deficiency as well. Parental, faculty, and contextual factors can also point to educational deficiencies. When a need for

intervention is emerges as the result of such student-based evidence, it is generally more authentic. Authentic needs carry a greater importance and priority to students, staff, parents and administration.

The other avenue by which a need for intervention arises is educational mandate. In this scenario, state or federal officials determine that a school must purchase a particular product or program. Schools are often required to purchase programs or participate in programs as a prerequisite for state/federal initiatives or grants. In other cases, outside agencies simply force schools to implement certain products and programs based on their own agency's criteria. One example of this is Oklahoma schools being forced to by the state-approved special education management software which is produced by only one vendor. Other schools may be identified as at-risk and may be forced to implement certain educational programs to meet external requirements. In such cases, schools generally have no option but to purchase a certain product. SBR status of those products is not an issue either – the SDE or USDE have approved them (presumably) and no further decisions or considerations are needed for the school leadership. EPR is only a factor when educators have a choice.

Choosing an Intervention

When school leaders do have a choice, a multitude of factors are in play. If the school leader already has a product identified, it is likely to be the product chosen. But since EPR is a holistic process, the product was most likely chosen by utilizing EPR – a key concept to keep in mind since EPR is being presented as a

linear process for the purpose of this paper. EPR is so ingrained into school leaders' psyches that the process is continual and on-going. Even before a need arises, school leaders have already employed EPR to identify which products or programs would potentially address reading deficiencies, math deficiencies, and etcetera. Therefore interventions may be chosen before, after, or in conjunction with the identification of an educational deficiency.

Utilizing Data Triangulation in EPR

Three categories of information are mined in order to choose an educational intervention – Professional Network, Data and Evidence, and E-Research. As with all aspects of EPR, these stages are often overlapping and accessed simultaneously and without much deliberation. It is this reliance on data that I believe is the revolutionary aspect of EPR. School leaders are indeed relying on data in order to maximize learning and to ensure that precious educational funds are spent wisely. Reliance on data for mandated programs and accountability measures has become increasingly more important in my practice for years, especially in light of NCLB. Educators' Product Research is truly significant because it signifies the integration of data and evidence analysis into the daily practice of school administrators – even when not mandated! Educators' Product Research is strong, unexpected evidence that school leaders are utilizing data and evidence, *even when no one is looking!*

How Professional Networks Assist in EPR

The first category of information I will discuss is the professional network accessed by school leaders as part of the process of choosing educational products

and programs. The network revealed to be utilized in EPR offers nothing new. The EPR professional network includes peers, fellow educators, consultants, classroom teachers, and even salespeople. Utilization of this network in choosing educational interventions can occur in conjunction with or separately from other EPR information resources. Data and evidence, for example, can be accessed through the professional network or analyzed with assistance from the professional network. Similarly, E-Research can be woven into the interactions involved within the professional network. This is not a formalized process of planning meetings regarding issues (although that can happen). Instead, educators utilize their networks informally, through quick phone calls and run-ins. It is simply a matter of talking to each other when the occasion or need arises. I was not surprised at all to uncover the involvement of the professional network in choosing educational products and programs. The other two areas, however, were more of a surprise.

Internal and External Data and Evidence in EPR

The second category of information accessed during Educators' Product Research should be of great comfort to advocates of data-driven and evidence-based decision making models in education. Years of pressing educators to rely on data and evidence has apparently paid off – school leaders use data and evidence when determining which educational interventions would be best for their schools. Not only do school leaders utilize data and evidence when required to do so (as could be supposed in SBR compliance), but they have come to rely upon it for a wide-array of decisions, even when not required to do so. During EPR, educators look at two

types of data and evidence – internal data/evidence and external data/evidence. Internal evidence generates from within the school, from classrooms, teachers, standardized test scores, and other site-based sources. This is the type of evidence that brings educational deficiencies to light for school leaders and creates the need for educational interventions. This data also provides educators with the information necessary to determine if a product or program has been effective within their local context. External evidence is the same type of evidence which has been generated from other school sites. Generally, external evidence is cited through the professional network when educators are trying to decide to purchase an intervention. This is evidence that the intervention has been effective in other schools as cited by peers. When discussing the effectiveness of products and programs with other educators, school leaders want to know that it has impacted learning in schools with similar contexts. Thus, external evidence is a very important component when shopping for interventions.

EPR and Full Reliance on the Internet for Research

The final leg of the EPR data and evidence tripod is E-Research. This is a truly revolutionary confirmation that the impact of the internet has transformed the educational process, at least for educators performing research for their jobs. Essentially, I found that the internet is the sole source of information needed for fact-checking, for verification of vendors' claims, and for access to traditional research resources. Whereas professional journals and research journals may be accessed, they are done so almost exclusively through the internet. Libraries, state

departments of education resources, and even publications are searched and accessed almost exclusively through the internet. Dictionaries, thesauri, and even encyclopedias are also checked on line. Vendors' websites are utilized in this manner and also stand as the primary source of "SBR" for documentation purposes. I truly believe that the beginning of the end of reliance on books, magazines, and other traditional reference sources is here. We have crossed the digital threshold as educators, something I experienced during my doctoral studies. I only visited the library twice – and only for a quiet spot to work. E-research is research for educators, no doubt in my mind.

EPR Versus SBR?

I do not believe that EPR is completely independent of SBR or NCLB. Obviously, the emphasis on data and evidence highlighted through NCLB has had some impact on educators. I also believe that SBR precipitated the evolution of EPR as a practitioner methodology of research. Without the mandate that educators make sound, research-based purchases, Educators' Product research would not exist in its current form. In many ways, we have been forced to consider data and evidence in our purchasing – to do research. Of course, EPR is not SBR and does not meet SBR thresholds. In many ways, however, EPR is better than SBR and stands as hope that the stagnant, rusty, educational machine is open to innovation. EPR proves that we, as educators, are willing to change our practice based on evidence.

The sophistication of research methods employed in EPR are clearly rudimentary in many ways, but they are also sophisticated in others. I suspect that EPR has many brothers and sisters in the world of educators' decision-making. It is something that occurs in other areas and regarding other problems. Over the years, I can only imagine how it will evolve into a truly effective methodology.

Emergence of a Central Category

Identification of a central category is a key outcome of Grounded Theory Methodology (Glaser, 1978, 1998). A central category is the underlying, unifying theme which ties all of the data together. In the case of this study, that central category is *pragmatism.* A great deal of leadership-level behavior can be ascribed to pragmatism, in education and in other disciplines (Demeroth, 2006; Gore, Banks, Millward, & Kyriakidou, 2006). Pragmatism seems to have guided how practitioners address SBR from its inception. Pragmatism has also been the underlying principle which has marginalized SBR to its current state. Pragmatism has emerged at every stage in this research.

In light of more pressing NCLB mandates, pragmatism has dictated that practitioners place more emphasis on such priorities as high-stakes testing, highly qualified teachers, and Adequate Yearly Progress. Mandates such as NCLB are often triaged in this manner (Fowler, 2008; Ginsberg & Lyche, 2008; Gore, Banks, Millward, & Kyriakidou, 2006; Schoen & Fusarelli, 2008). Investing any more time or resources than necessary in SBR would not be pragmatic; in fact, it could be irresponsible. Pragmatism accounts for the ambivalence toward SBR, even the use

of consultants and the use of vendors' research. Reducing SBR to a box-to-be-checked minimized its impact on local choice. OKSDE oversight has effectively eliminated SBR as a real concern for schools, as well. Ambivalence toward SBR is warranted. The mandate has been effectively marginalized through a pragmatic outlook.

Pragmatism also accounts for the emergence of Educator's Product Research. It is an efficient and effective alternative to SBR which (arguably) meets the spirit of the law – something which may be welcomed by SBR critics (N. K. Denzin, Lincoln, & Giardina, 2006). Unofficially accepted by the OKSDE, EPR has filled the gap and may actually mark the salvation of SBR as a concept. EPR utilizes existing processes already familiar to rural superintendents and already part of their daily practice. Rural school reliance on the internet makes practical sense as well. EPR has emerged as a pragmatic solution which enables rural superintendents to make good product choices and to satisfy the OKSDE regarding scientifically based research. The most encouraging aspect of EPR may be the proof it provides that rural Oklahoma superintendents are committed to an evidence-based decision-making process which respects fundamental research concepts, while still acting with common-sense. These practitioners may be more research-minded than previously thought.

Emerging Theory

The ultimate goal of this Grounded Theory Study was to generate theory regarding How Rural Oklahoma School Superintendents Address the Scientifically

Based Research Mandate of No Child Left Behind. The theory which emerged from this study is the following:

> *Educator's Product Research has evolved as the result of a greater demand for evidence-based and data-driven decision-making among educators when purchasing educational products and as a practical substitute to the Scientifically Based Research mandate of No Child Left Behind, which as been marginalized. EPR is a separate and distinct decision-making process utilized in the purchasing of educational products and programs for schools. The sole reliance on E-Research for fact-checking and non-local data gathering for purchasing decisions marks a paradigm shift in educator's purchasing habits which was not possible before widespread utilization of the Internet.*

Recommendations for Further Research

Several concepts and questions emerged form the data which merit further investigation, especially in relation to Scientifically Based Research. Other concepts, such as Educator's Product Research, hint at larger issues in education and in research. Very little research exists into the SBR phenomenon as it relates to practitioners. The recommendations below represent only the issues which seemed clear to me as a direct result of this research.

The SBR Issue From Other Perspectives

This study was limited to rural Oklahoma school superintendents and only offers a glimpse into the SBR issue. Investigation into how superintendents of

larger districts are addressing SBR is also needed as is research from other educators' perspectives – including directors, principals, and teachers.

What Works at What Works?

Research is warranted into the What Works Clearinghouse on many fronts. A thorough examination of the number of successful product reviews versus the number of products who failed to meet evidence standards would be helpful in gaining perspective on the SBR definition of research mandated by NCLB. This, along with a cost-benefit analysis which shows the actual rate of utilization by educators would provide insight into the WWC's overall usefulness to public schools. Recent research suggests that the cost-benefit of products and programs should be considered as part of its overall efficacy (Harris, 2009), but research into the cost-benefit of WWC itself is also warranted. Finally, exploration is needed into alternatives or modifications to WWC that could make WWC more effective or could replace WWC altogether.

Educator's Product Research

The question remains if EPR is a new phenomenon that has emerged as a result of or in conjunction with SBR. The sole reliance on the Internet instead of traditional research sources may or may not be a constant among other administrators and/or in other contexts. Research could also investigate how other superintendents in other contexts are making product and program choices in light of the SBR mandate. Research may also confirm the scientific validity of EPR and/or classify EPR with existing research methodologies. Research could help

discern if the EPR model explains practitioner research in other areas of educational decision-making as well.

E-Research as the Norm

The data suggest that rural schools may have shifted to a total reliance on e-research. Research is needed to determine if E-research is the norm across education as well. If this is confirmed, then the digital paradigm shift has come to fruition in many ways – a reality which could have far-reaching implications for education.

The Impact of SBR on Product Choice

Recent research has suggested that choices are already being limited for schools as a result of SBR, smaller companies are finding it harder to compete, and SBR favors the largest educational firms (Burch, Stienberg, & Donovan, 2007; Fusarelli, 2007). Research is needed into how this is occurring and the possible ramifications of an FDA-like process emerging based on WWC guidelines. What would happen if schools could only used WWC listed products and programs?

EPR and E-Rate

The E-research aspect of EPR invites research into the impact of federal programs and nation-wide initiatives to connect all schools and classrooms to the Internet. E-research could not have become a practice in rural schools without the E-Rate program and other initiatives. Research is needed into the relationship of connectivity programs (such as E-Rate) and the widespread use of E-research.

E-Research and Doctoral Programs

Research is also needed into the phenomenon of E-Research and doctoral programs as well. This researcher's doctoral studies were conducted almost exclusively through E-Research as well. With this and EPR in mind, E-Research may be a larger paradigm shift in the educational field than just in product research. It may be evident that the digital age has finally passed the point of no return.

State Departments of Education as SBR Intermediaries

The role of state departments of education regarding SBR should be investigated as well to see if the OKSDE model is occurring elsewhere. Studies into how SDE officials in Oklahoma or other states are addressing SBR at the state level could also provide more information into the true state of SBR, the role of the WWC, and the EPR process. If SDE's are meeting this need in other states as well, investigation should also be made to determining what criteria SDE's employ in that process.

Professional Training for School Administrators

In light of SBR and the current emphasis on data and evidence, research is needed into professional training for educational administrators into educational research consumerism, data analysis, and use of evidence to impact learning. Research already suggests that school leaders are required to consume and process more data as a result of NCLB and that training is needed in this area (Archibald, 2008; Eisenhart & DeHaan, 2005; Luo, 2008; Zientek, Capraro, & Capraro, 2008). A survey of leading Educational Leadership programs could yield valuable insight

into how much emphasis there is regarding research training and interpretation of data/evidence in Masters' and Doctoral programs.

Another consideration is that school leaders work under increasing pressure to perform data analysis and to collect evidence regarding their schools and decisions they make in their practice, but the growing trend indicates that more school leaders are being trained in non-research Universities (Baker, Orr, & Young, 2007). Criticism also exists that doctoral students are not being adequately trained for research (Archibald, 2008; Eisenhart & DeHaan, 2005; Luo, 2008; Zientek, Capraro, & Capraro, 2008). It seems possible that Educational Leadership training may be neglecting research principles. Research is needed into the proper role of educational research skills in Educational Leadership training programs and into continuing education programs to determine how to address deficiencies in formal training and professional development.

The Use of Technology in Grounded Theory Research

With the growing popularity of Grounded Theory Research(Glaser, 1998), investigation is warranted into the impact of technology and the use of technology among GTM researchers and how GTM researchers use technology to perform GTM research. Recommendations could emerge which facilitate Grounded Theory research for future researchers.

The Effectiveness of Educators' Product Research

Since educators have developed their own version of SBR, research is needed into the effectiveness of the system. The effectiveness of EPR-chosen

products as compared to SBR products is of primary concern. Since research has already suggested that SBR products may not impact classroom instruction more than non-SBR products (Burch, Stienberg, & Donovan, 2007; Dickson, 2006; Fusarelli, 2007), more investigation is needed into EPR to see if it is an effective method for choosing effective products.

Expansion on EPR: Developing a True Methodology

As research comes to light regarding how educators really choose educational products and programs, it will be important to consider how that applies to formal education, training, and research. Formal training in EPR may well be necessary as time passes to ensure that school leaders continue to make effective choices for schools and to ensure that EPR does emerge from informality to methodology.

Conclusion

The Scientifically Based Research mandate of No Child Left Behind has not been a priority for rural Oklahoma school superintendents. Instead, SBR has been marginalized in Oklahoma for two main reasons. First, Oklahoma superintendents share the perception that SBR is driven by commercial and political agendas, primarily because product research is available almost exclusively through the vendors. Secondly, the Oklahoma State Department of Education has become an effective intermediary for schools regarding SBR and has insulated schools from potential financial ramifications. As a result, widespread ambivalence exists regarding the Scientifically Based Research mandate. The data suggest, however,

that educators are verifying the efficacy of the products and programs through their own version of SBR – Educator's Product Research – which has emerged as a pragmatic solution to demands for evidence and to the SBR mandate. The rise of EPR suggests that the use of data and evidence in decision-making among school leaders has been solidly integrated into their practice in rather sophisticated ways.

References

Allmeroth, T. W. (2006). *The influence of No Child Left Behind on assessment, curriculum, and pedagogy from voices in the field.* Unpublished Ph.D., University of Nevada, Reno.

American Educational Research Association. (2006). AERA task force on reporting research methods. Retrieved April 21, 2006

Archibald, D. (2008). Research versus problem solving for the education leadership doctoral thesis: Implications for form and function. *Educational Administration Quarterly, 44*(5), 704-739.

Arnold, M. L., Biscoe, B., Farmer, T., Robertson, D., & Shapley, K. (2007). *How the government defines rural has implications for education policies and practices*: Regional Educational Laboratory Southwest.

Arnold, M. L., Newman, J. H., Gaddy, B. B., & Dean, C. B. (2005). A look at the condition of rural education research: Setting a direction for future research. *Journal of Research in Rural Education, 20*(6).

Asher, J. J. (2000). *Learning another language through actions, 6th edition*. Los Gatos, CA: Robertson Publishing.

Association of Educational Publishers. (2003a). AEP activities, testimony, and position papers. Retrieved November 11, 2008, from http://www.aepweb.org/govrelations/ArchivesAEP/background.htm

Association of Educational Publishers. (2003b). Leave no publisher behind: AEP requests clarification. Retrieved November 10, 2008, from http://www.aepweb.org/mediacenter/AEPNCLBletter.htm

Baker, B., Orr, M. T., & Young, M. D. (2007). Academic drift, institutional production, and professional distribution of graduate degrees in educational leadership. *Educational Administration Quarterly, 43*(3), 279-318.

Ball, S. J. (1998). Big policies/ small world: an introduction to international perspectives in education policy. *Comparative Education, 34*(2).

Beck, F., & Shoffstall, G. (2005). How do rural schools fare under a high stakes testing regime? *Journal of Research in Rural Education, 20*(14).

Berliner, D. C. (2002). Comment: Educational research: The hardest science of all. *Educational Researcher, 31*(8), 18-20.

Bingenheimer-Rendahl, F. J. (2006). *Implementation models of professional development required by no child left behind.* University of Arizona.

Blankenship, V. H. (2007). *No child left behind's school choice and supplemental educational services provisions: a descriptive study of implementation in eleven Arkansas school districts.*, George Washington University, Washington D.C.

Boardman, A. G., Arguelles, M. E., Vaughn, S., Hughes, M. T., & Klingner, J. (2005). Special education teachers' views of research-based practices. *Journal of Special Education, 39*(3), 168-180.

Browne-Ferrigno, T., & Allen, L. (2006). Preparing principals for high-need rural schools: A central office perspective about collaborative efforts to transform school leadership. *Journal of Research in Rural Education, 21*(1), 1-16.

Bulterman-Bos, J. A. (2008). Will a clinical approach make educational research more relevant for practice? *Educational Researcher, 37*(7), 412-420.

Burch, P., Stienberg, M., & Donovan, J. (2007). Supplemental educational services and NCLB: Policy assumptions, market practices, emerging issues. *Educational Evaluation and Policy Analysis, 29*(2), 115-133.

Buttram, J., & Carlson, R. (1983). Effective school research: Will it play in the country? *Research in Rural Education, 2*(2), 73-78.

Calloway, L. J. (1995). Using grounded theory to interpret interviews. Retrieved November 28, 2007, from http://csis.pace.edu/~knapp/AIS95.htm

Chatterji, M. (2005). Evidence on "what works": An argument for extended-term mixed-method (ETMM) evaluation designs. *Educational Researcher, 34*(5), 14-24.

Cheuk, B. (2007). Social networking analysis: Its application to facilitate knowledge transfer. *Business Information Review, 24*(3), 170-178.

Christenson, S., Decker, D., Triezenberg, H., Ysseldyke, J., & Reschly, A. (2007). Consequences of high-stakes assessment for students with and without disabilities. *Educational Policy, 21*(4), 662-690.

Cook, G. (2009). Duncan looks right for the job. *American School Board Journal, February*, 6-10.

Cooper, B. S., Fusarelli, L. D., & Randall, E. V. (2004). *Better policies, better schools: theories and applications*. Boston: Pearson.

Cranston, N., Ehrich, L., & Kimber, M. (2003). The "Right" decision? Towards and understanding of ethical dilemmas for school leaders. *Westminster Studies in Education, 26*(2), 135-147.

Creswell, J. W. (1998). *Qualitative inquiry and research design: choosing among five traditions*. Thousand Oaks, CA: Sage Publications.

Daly, A. J. (2009). Rigid response in an age of accountability: The potential of leadership and trust. *Educational Administration Quarterly, 45*(2), 168-216.

De Young, A. (1995). Bringing multiple worlds: The school superintendent as change agent in a rural and poor school district. *Journal of Research in Rural Education, 11*(3), 187-197.

Decker, R., & Talbot, A. (1991). The shared superintendency. *Journal of Research in Rural Education, 7*(3), 59-66.

Demeroth, P. (2006). The science of context: modes of response for qualitative researchers in education. *International Journal of Qualitative Studies in Education, 19*(1), 97-113.

Denzin, N. K., & Lincoln, Y. S. (1994). *Handbook of Qualitative Research*. Thousand Oaks, CA: Sage.

Denzin, N. K., Lincoln, Y. S., & Giardina, M. D. (2006). Disciplining qualitative research. *International Journal of Qualitative Studies in Education, 19*(6), 769-782.

Dickson, R. A. (2006). *The effect on student achievement of research-baseed versus non-research-based reading programs.* Capella University.
Edmondson, J., & Shannon, P. (2003). Reading First initiative in rural pennsylvania. *Journal of Research in Rural Education, 18*(1), 31-34.
Eisenhart, M. (1998). On the subject of interpretive reviews. *Review of Educational Research, 68*(4), 391-399.
Eisenhart, M. (1999). Reflections on educational intervention in light of postmodernism. *Anthropology & Education Quarterly, 30*(4), 462-465.
Eisenhart, M., & DeHaan, R. (2005). Doctoral preparation of scientifically based Education researchers. *Educational Researcher, 34*(4), 3-13.
Eisenhart, M., & Towne, L. (2003). Contestation and change in national policy on "scientifically based" education research. *Educational Researcher, 32*(7), 31-38.
Erickson, F., & Gutierrez, K. (2002). Comment: culture, rigor, and science in educational research. *Educational Researcher, 31*(8), 21-24.
Feuer, M. J., Towne, L., & Shavelson, R. J. (2002). Scientific culture and educational research. *Educational Researcher, 31*(8), 4-14.
Fowler, F. (2008). *Policy studies for educational leaders: an introduction*. Boston: Pearson.
Fusarelli, L. D. (2007). Restricted choices, limited options: Implementing choice and supplemental educational services in No Child Left Behind. *Educational Policy, 21*(1), 132-154.
Fusarelli, L. D. (2008). Flying (partially) blind: School leaders' use of research in decision-making. *Phi Delta Kappan, January*, 365-368.
Ginsberg, R., & Cooper, B. S. (2008). What's fear got to do with it? *Educational Policy, 22*(1), 5-9.
Ginsberg, R., & Lyche, L. (2008). The culture of fear and politics of education. *Educational Policy, 22*(1), 10-27.
Glaser, B. (1978). *Theoretical Sensitivity*. Mill Valley: Sociology Press.
Glaser, B. (1998). *Doing grounded theory -- issues and discussions.* Mill Valley, CA: Sociology Press.
Glaser, B., & Strauss, A. (1967a). *The dicovery of grounded theory*. New York, NY: Aldine.
Glaser, B., & Strauss, A. (1967b). *The discovery of grounded theory: strategies for qualitative research*. New York: Aldine de Gruyter.
Gore, J., Banks, A., Millward, L., & Kyriakidou, O. (2006). Naturalistic decision making and organizations: Reviewing pragmatic science. *Organization Studies, 27*(7), 952-942.
Gubbins, C., & MacCurtain, S. (2008). Understanding the dynamics of collective learning: The role of trust and social capital. *Advances in Developing Human Resources, 10*(4), 578-599.
Harris, D. (2009). Toward policy-relevant benchmarks for interpreting effect sizes: combining effects with costs. *Eduational Evaluation and Policy Analysis, 31*(3).

Hass, B. (2004). The brouhaha surrounding scientifically-based research. *The Stanford Educator, Fall 2004*, 1-2.
Hatala, J. (2006). Social network analysis in Human Resource Development: A new methodology. *Human Resource Development Review, 5*(1), 45-71.
Heide, H. A. (1996). *Certifying software engineers in industry.* Unpublished M.S., California State University, Fullerton, United States -- California.
Heller. (2002). What will scientifically-based research mean to education vendors? *Internet strategies for education markets: The Heller report.* Retrieved October 10, 2008, from http://findarticles.com/p/articles/mi_m0BTY/is_1_8/ai_89397432/print?tag=artBody;col1
Henry, M. N. (2004). No child left behind? Educational malpractice litigation for the 21st century. *California Law Review, 92*(4 (July)), 1117-1171.
Hess, F. M. (2005). Commentary: Accountability policy and scholarly research. *Educational Measurement: Issues and Practice, 24*(4), 53-57.
Hess, F. M. (2008). The politics of knowledge. *Phi Delta Kappan, January 2008*, 354-356.
Hess, F. M., Litow, S. S., & Elmore, R. (2002). Accountability and support in Chicago: Consequences for students. . *Brookings Papers on Educational Policy, 5*, 339-387.
Hodges, A. E. (2006). *The No Child Left Behind Act of 2001: The impact of policy requirements and recommendations for policy improvements.* Unpublished Ed.D., University of Delaware, United States -- Delaware.
Honig, M. I. (2004). The new middle management: intermediary organizations in educational policy implementation. *Educational Evaluation and Policy Analysis, 26*(1), 2004.
Honig, M. I., & Coburn, C. (2008). Evidence-based decision making in school district central offices: Toward a policy and research agenda. *Educational Policy, 22*(4), 578-608.
Hostetler, K. (2005). What is "good" education research? *Educational Researcher, 34*(6), 16-21.
Hursh, D. (2007). Assessing No Child Left Behind and the rise of neoliberal educationl policies. *American Educational Research Journal, 44*(3), 493-518.
Jacobson, S., & Woodworth, B. (1990). Preparing rural administrators: what do they need? What do they want? *Research in Rural Education, 6*(33-42).
Jennings, J. F. (1999). A brief history of the federal role in education: why it began and why it is still needed. *Center on educational policy*.
Jez, E. (1999). *Impact of reorganization on the policy implementation process in Virginia's department of education 1990-1994.* Virginia Commonwealth University, Virginia.
Kirk, S. A. (2005). *Educators' understanding and implications of the No Child Left Behind Act of 2001.* Unpublished Ed.D., The University of Oklahoma, United States -- Oklahoma.

Lather, P. (2006). Foucauldian scientficity: rethinking the nexus of qualitative research and educational policy analysis. *International Journal of Qualitative Studies in Educationa, 19*(6), 783-791.

Laumann, E., & Knoke, D. (1987). *The organizational state: Social choice in national policy domains.* Madison: University of Wisconsin Press.

Leithwood, K. A., & Anderson, S. (1988). *Evaluating policy implementation.* Toronto: The Ontario Institute for Studies in Education.

Leithwood, K. A., & Riehl, C. (2003). *What we know about successful school leadership.* Philadelphia, PA: Laboratory for Student Success.

Leithwood, K. A., & Stager, M. (1989). Expertise in principals' problem solving. *Educational Administration Quarterly, 25*(2), 126-162.

Leithwood, K. A., Steinbach, R., & Raun, T. (1993). Superintendents' group problem-solving processes. *Educational Administration Quarterly, 29*(3), 364-391.

Lemmens, T., & Freedman, T. (2000). Ethics review for sale? Conflict of interest and commercial research review boards. *The Milbank Quarterly, 78*(4), 547-584.

Lund, T. (2005). The qualitative-quantitative distinction: Some comments. *Scandanavian Journal of Educational Research, 49*(2), 115-132.

Luo, M. (2008). Structural equation model for high school principals' data-driven decision making: An analysis of information use environments. *Educational Administration Quarterly, 44*(5), 603-634.

Manna, P. (2006). Control, persuasion, and educational accountability: Implementing the No Child Left Behind Act. *Educational Policy, 20*(3), 471-494.

Manning, C. S. (2005). *The Perceptions of Curriculum Leaders in Kansas Regarding the No Child Left Behind Act of 2001: An Exploratory Study.* Kansas State University, Manhattan, Kansas.

Manzano, K. K. (2005). U.S. senate education leaders seek investigation into reading first program Retrieved October 26, 2008, from http://www.edweek.org/login.html?source=http%3A%2F%2Fwww.edweek.org%2Fsearch.html%3Fqs1%3Dreading%2Bfirst%26qs2%3D%26qs3%3D%26qs4%3D%26src%3Dall%26prd%3Dc%26sprdMonth%3D10%26sprdYear%3D2005%26eprdMonth%3D10%26eprdYear%3D2005%26occ%3Dp%26prx%3Dp%26srt%3Dr%26go%3D%2B%2B%2BGo%2B%2B%2B&destination=http%3A%2F%2Fwww.edweek.org%2Few%2Farticles%2F2005%2F10%2F04%2F06read_web.h25.html%3Fqs%3Dreading%2Bfirst&levelId=2100&baddebt=false

Mathis, W. J. (2004). No Child Left Behind Act: What will it cost states? *Spectrum: The Journal of State Government, 77*(7), 8-10.

Mayer, R. E. (2001). Resisting the assault on science: the case for evidence-based reasoning in educational research. *Educational Researcher, 30*(7), 29-30.

McDonnell, L. M. (2005). No Child Left Behind and the federal role in education: Evolution or revolution. *Peabody Journal of Education, 80*(2), 19-38.

McLaughlin, W. M. (1987). Learning from experience: lessons from policy implementation. *Educational Evaluation and Policy Analysis, 9*(2), 171-178.
Melnick, S., & Henk, W. (2006). Researchers at the gate: Factors influencing districts' right of entry decisions. *Educational Administration Quarterly, 42*(4), 652-661.
Merriam, S. B. (1998). *Qualitative research and case study applications in education*. San Francisco: Jossey-Bass Publishers.
Meyer, K. (2004). No Child Left Behind Act: A national perspective. *Spectrum: The Journal of State Government, 77*(2), 5-7.
Mohammed, S. F. (2005). *State planning strategies to implement the scientific based research of the NCLB act.*, Florida Atlantic University, Boca Raton.
MSNBC. (2009). Secretary of education Arne Duncan is interviewed on MSNBC.
National Education Association. (2008). NEA Factoids. Retrieved November 11, 2008, from http://www.nea.org/nclbaction/facts.html
Nestor-Baker, N., & Hoy, W. (2001). Tacit knowledge of school superintendents: Its nature, meaning, and content. *Educational Administration Quarterly, 37*(1), 86-129.
NTSA. (2009). President-elect Obama selects Chicago superintendent Arne Duncan as new education secretary. *National Sciencte Teachers Association Journal, February*, 12-14.
Obama Biden Campaign. (2008a). Barack Obama and Joe Biden's plan for lifetime success through education. Retrieved November 10, 2008, from http://www.barackobama.com/issues/PreK-12educationfactsheet/
Obama Biden Campaign. (2008b). INVESTING in America's future. Barack Obama and Joe Biden's plan for science and innovation. Retrieved November 10, 2008, from www.barackobama.com/issues/factsheetscience/
Obama Biden Campaign. (2008c). Reforming and strenghtening America's schools for the 21st century. Retrieved November 10, 2008, from http://www.barackobama.com/issues/education/
Office of Accountability. (2008). *District Report Cards*. Oklahoma City: State of Oklahoma Education Oversight Board Office of Accountability.
Oklahoma State Department of Education. (2008). Retrieved March 30, 2008
Oklahoma State Department of Education. (2009a). Academic performance index. Retrieved March 7, 2009, from http://www.sde.state.ok.us/AcctAssess/API.html
Oklahoma State Department of Education. (2009b). School District Database: Oklahoma State Department of Education.
Oppenheimer, T. (2007). How vendors manipulate research and cheat students. *Education Next: A Journal of Opnion and Research, 7*(2), 1-5.
Paley, A. R. (2007). Key initiative of 'no child' under federal investigation: officials profited from Reading First program. Retrieved October 26, 2008, from http://www.washingtonpost.com/wp-dyn/content/article/2007/04/20/AR2007042002284.html

Pellegrino, J. W., & Goldman, S. R. (2002). Comment: Be careful what you wish for: You may get it: Educational research in the spotlight. *Educational Researcher, 31*(8), 15-17.
Phelps, R. (2003). The rigor of scientifically-based research on doctored data may be mortis. . Retrieved March 5, 2006, from http://www.thirdeducationgroup.org/RigorMortis.htm
Pierre, S. (2006). Scientifically based research in edcuation: epistemology and ethics. *Adult Education Quarterly, 56*(4), 239-266.
Planty, M., Hussar, W., Snyder, T., Provasnik, S., Kena, G., Dinkes, R., et al. (2008). *The condition of education*: National Center for Educational Statistics: Institute of Educational Sciences.
Popham, J. W. (2005). The age of compliance. *Educational Leadership*(November), 84-85.
Preissle, J. (2006). Envisioning qualitative inquiry: a view across four decades. *International Journal of Qualitative Studies in Education, 19*(6), 685-695.
Protheroe, N. (2004). NCLB dismisses research vital to effective teaching. *Education Digest, April 2004*, 27-30.
Reeves, D. B. (2004a). *Accountability for Learning: How teachers and school leaders can take charge.* . Alexandria, VA: Association for Supervision and Curriculum Development.
Reeves, D. B. (2004b). *Accountability for learning: How teachers and schoos leaders can take charge.* Alexandria, VA: Association for Supervision and Curriculum Development.
Reeves, D. B. (2006). *The learning leaders: how to focus school improvement for better results.* Alexandria, VA: Association for Supervision and Curriculum Development.
Reid, N., Smith, B., & Michael, C. (2008). Cluster regions: A social network perspective. *Economic Development Quarterly, 22*(4), 345-352.
Roza, M., Miller, L., & Hill, P. (2005). *Strengthening Title I to help high-poverty schools: how Title I funds fit into district allocation patterns*. Seattle, WA: Center on Reinventing Public Education.
Ruff, W. G., & Shoho, A. R. (2005). Understanding instructional leadership through the mental models of three elementary school principals. *Educational Administration Quarterly, 41*(3), 554-577.
Ryan, T. J. (2007). *Federal policy implementation: a study of the implementation procedures of IDEA 1997 and NCLB in state and local school districts.*, University of Pennsylvania.
Sabatier, P. (1999). *Theories of the policy process*. Boulder, CO: Wesview Press.
Schoen, L., & Fusarelli, L. D. (2008). Innovation, NCLB, and the fear factor. *Educational Policy, 22*(1), 181-203.
Scott, A. (2005). *A quanitiative examination of Title I and non Title I elementary schools in east tennessee using fourth-grade math and reading standardized test scores.* East Tennessee State University.

Sherman, W. (2008). No Child Left Behind: A legislative catalyst for superintendent action to eliminate test-score gaps? *Educational Policy, 22*(5), 675-704.

Sherwood, T. (2000). Where has all the "rural" gone? Rural education research and current federal reform. *Journal of Research in Rural Education, 16*(3), 159-167.

Simpson, R. L. (2005). Evidence-based practices and students with autism spectrum disorders. *Focus on Autism and Other Developmental Disabilities, 20*(3), 140-149.

Sipple, J. W., Killeen, K., & Monk, D. H. (2004). Adoption and adaptation: school district responses to state imposed learning and graduation requirements. *Eduational Evaluation and Policy Analysis, 26*(2), 143-168.

Slavin, R. (2002). Evidence-based educaiton policies: Transforming educational practice and research. *Educational Researcher, 31*(7), 15-21.

Slavin, R. (2008). Perspectives on evidence-based research in education what works? Issues in synthesizing educaitonal program evaluations. *Educational Researcher, 37*(1), 5-14.

Sly, G., Everett, R., McQuarrie, F., & Wood, F. (1990). The shadowed face of staff developmen: Rural schools. *Research in Rural Education, 6*(3), 11-19.

Smångs, M. (2006). The nature of the business group: A social network perspective. *Organization, 13*(6), 889-909.

Smeaton, P., & Waters, F. (2008). A statewide investigation into meeting the mandates of No Child Left Behind. Retrieved November 14, 2008, from http://www.ruralpa.org/NCLB.pdf

Software and Information Industry Association. (2008). Retrieved November 10, 2008, from http://www.siia.net/govt/docs/pub/ObamaMcCainStaffEdDebate.pdf

Song, M., & Miskel, C. (2005). Who are the influentials? A cross-state social network analysis of the reading policy domain. *Educational Administration Quarterly, 41*(1), 7-8.

Song, M., & Miskel, C. (2007). Exploring the structural properties of the state reading policy domain using network visualization technique. *Educational Policy, 21*(4), 589-614.

Spellings, M. (2007). *The U.S. Department of Education: A blueprint for strenghtening the No Child Left Behind Act*. Washington, D.C.

Spillane, J. T., Diamond, J. B., Burch, P., Hallet, T., Jita, L., & Zoltners, J. (2002). Managing in the middle: school leaders and the enactment of accountability policy. *Educational Policy, 16*(731).

Spillane, J. T., Reiser, B. J., & Reimer, T. (2002). Policy implementation and cognition: reframing and refocusing implementation research. *Reveiw of Educational Research, 72*(3), 387-431.

St. Pierre, E. A. (2002). "Science" rejects postmodernism. *Educational Researcher, 31*(8), 25-27.

Superfine, B. M. (2005). The politics of accountability: The rise and fall of goals 2000. *American Journal of Education, 112*(November), 10-43.
Tate IV, W. (2008). Geography of opportunity: Poverty, place, and educational outcomes. *Educational Researcher, 37*(7), 397-411.
The Heller Report. (2002). Internet strategies for education markets: What will scientifically-based research mean to education vendors? Retrieved November 10, 2008, from http://findarticles.com/p/articles/mi_m0BTY/is_1_8/ai_89397432/print?tag=artBody;col1
The National Commission on Excellence in Education. (1983). *A nation at risk: the imperative for educational reform. A report to the nation and the secretary of education.* Washington, D.C.: United States Department of Education.
Toppo, G. (2005). Federally funded Reading First called into question. Retrieved October 26, 2008, from http://www.usatoday.com/news/education/2005-08-07-reading-first_x.htm
United States Department of Education. (2006). The Reading First's program's grant application process. Final inspection report. Retrieved November 8, 2008, from http://www.ed.gov/about/offices/list/oig/aireports/i13f0017.pdf
United States Department of Education. (2007). No Child Left Behind Act of 2001. Retrieved November 25, 2007, from http://www.ed.gov/policy/elsec/leg/esea02/index.html
United States Department of Education. (2008). What works clearinghouse. Retrieved March 10, 2008, from http://ies.ed.gov/ncee/wwc/
United States Department of Education. (2009). What works clearinghouse. Retrieved March 10, 2009, from http://ies.ed.gov/ncee/wwc/
Wagoner, M. (2007). Kennedy releases report on reading forst investigation. Retrieved October 26, 2008, from http://kennedy.senate.gov/newsroom/press_release.cfm?id=3CC1E674-CB51-42C2-A4F9-90395A0DC291
Wasserman, S., & Faust, K. (1994). *Social network analysis: Methods and applications*. New York: Cambridge University Press.
Weber, J., Kopelman, S., & Messick, D. (2004). A conceptual review of decision-making in social dilemmas: Applying a logic of appropriateness. *Personality and Social Psychology Review, 8*(3), 281-307.
Whitcomb, L. D., & Borko, H. (2007). NCLB adn scientifically-based research. *Journal of Teacher Education, 58*(2), 99-107.
Wills, F. G. (1992). External pressures for reform and strategy formation at the district level: superintendents' interpretations of state demands. *Educational Evaluation and Policy Analysis, 14*(3), 241-260.
Wright, H. K. (2006). Are we (t)here yet? Qualitative research in education's profuse and contested present. *International Journal of Qualitative Studies in Education, 19*(6), 793-802.

Yell, M. L., Drasgow, E. L., & Lowrey, K. L. (2005). No Child Left Behind and students with autism spectrum disorders. *Focus on Autism and Other Developmental Disabilities, 20*(3), 130-139.

Zientek, L. R., Capraro, M. M., & Capraro, R. M. (2008). Reporting practices in quantitative teacher education research: One look at the evidence cited in the AERA panel report. *Educational Researcher, 37*(4), 208-216.

Appendix

University of Oklahoma
Institutional Review Board
Informed Consent to Participate in a Research Study

Project Title:	How Rural Oklahoma Superintendents Address the Scientifically Based Research Mandate of No Child Left Behind
Principal Investigator:	Tom Deighan
Department:	Educational Administration and Curriculum Supervision

You are being asked to volunteer for this research study. This study is being conducted at the University of Oklahoma, Norman Campus. You were selected as a possible participant because of your experience as a school administrator in the state of Oklahoma.

Please read this form and ask any questions that you may have before agreeing to take part in this study.

Purpose of the Research Study

The purpose of this study is:

This study will simply examine the research-based mandate of No Child Left Behind (NCLB) and your experiences with it as a professional. Specifically, I hope to examine how rural superintendents cope with the SBR mandate of NCLB.

Number of Participants

About 30 people will take part in this study.

Procedures

If you agree to be in this study, you will be asked to do the following:

I will contact you for an interview (phone or face-to-face), which will last from 30-45 minutes. With your permission, I will record our interview. Also with your permission, you will be identified at the beginning of that recording. After that, a code name will be assigned to you. All of the questions will be related strictly to the NCLB research-based mandate.

Length of Participation

Other than the initial contact and the interview, there should be no further involvement unless the research suggests a need for some follow-up questions. The interview should last between 30 and 45 minutes. If I examine the interviews and see an area that should be addressed to make the research more complete, I may contact you for one follow-up interview.

This study has the following risks:

All responses and information is kept strictly confidential in accordance with OU policies. No foreseeable risks have been identified.

Benefits of being in the study are

NONE

Confidentiality

In published reports, there will be no information included that will make it possible to identify you without your permission. Research records will be stored securely and only approved researchers will have access to the records.

There are organizations that may inspect and/or copy your research records for quality assurance and data analysis. These organizations include the OU Department of Educational Administration and Curriculum Supervision and the OU Institutional Review Board.

Compensation

You not be reimbursed for you time and participation in this study.

Voluntary Nature of the Study

Participation in this study is voluntary. If you withdraw or decline participation, you will not be penalized or lose benefits or services unrelated to the study. If you decide to participate, you may decline to answer any question and may choose to withdraw at any time.

Waivers of Elements of Confidentiality

Your name will not be linked with your responses unless you specifically agree to be identified. Please select one of the following options

_____ I consent to being quoted directly.

_____ I do not consent to being quoted directly.

_____ I consent to having my name reported with quoted material.

_____ I do not consent to having my name reported with quoted material

Audio Recording of Study Activities

To assist with accurate recording of participant responses, interviews may be recorded on an audio recording device. You have the right to refuse to allow such recording without penalty. Please select one of the following options.

I consent to audio recording. ___ Yes ___ No.

Contacts and Questions

If you have concerns or complaints about the research, the researcher(s) conducting this study can be contacted at [redacted]

Contact the researcher(s) if you have questions or if you have experienced a research-related injury.

If you have any questions about your rights as a research participant, concerns, or complaints about the research and wish to talk to someone other than individuals on the research team or if you cannot reach the research team, you may contact the University of Oklahoma – Norman Campus Institutional Review Board (OU-NC IRB) at 405-325-8110 or irb@ou.edu.

You will be given a copy of this information to keep for your records. If you are not given a copy of this consent form, please request one.

Statement of Consent

I have read the above information. I have asked questions and have received satisfactory answers. I consent to participate in the study.

Signature Date