

THE CHANGE PROCESS:
STAGES OF CONCERN OF THE STANDARDS OF LEARNING IN
SUPERINTENDENTS' REGION SEVEN IN VIRGINIA

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(ABSTRACT)

The purpose of this study was to determine the levels of concern of central office instructional administrators, building level principals, and teachers in Superintendents' Region Seven as they implement Virginia's Standards of Learning initiative. The Stages of Concern (SOC) Questionnaire and demographic sheet were mailed to a sample of 405 instructional personnel of Superintendents' Region Seven in Virginia; 231 responded. The data were analyzed using descriptive statistics and multivariate analysis of variance procedures at the $\alpha=.05$ level of significance.

Results revealed that central office instructional administrators (N=31), elementary principals (N=31), secondary principals (N=32), and elementary (N=33) and secondary teachers (N=33) not responsible for administering SOL Tests possessed profiles indicative of nonusers. The concerns for these groups were typically highest on stages 0, 1, and 2 and lowest on stages 4, 5, and 6. When the data were analyzed for elementary (N=30), and secondary teachers (N=41) responsible for administering SOL Tests, the findings identified these groups as possessing similar concerns. These groups were highest in stages 3, 6, and 2, respectively.

A series of ANOVAs and Scheffes' post hoc analyses at the .05 level were conducted to analyze the data according to the group position/user or nonuser in relation to the seven stages of concern. When the participants were grouped according to position/grade level in relation to the seven stages of concern, an analysis of variance and Scheffes' post hoc were conducted to determine if the groups were significantly different at the .05 level.

How practitioners feel about and perceive change will in large part determine whether or not change actually occurs in schools. The amount and scope of educational change needed to successfully implement the Standards of Learning is evident. It is believed the results of this study will provide reformers with an assessment of the various perceptions educators in Superintendents' Region Seven have regarding the implementation of the Standards of Learning. The implications and recommendations could aid reformers as they continue to implement the Standards of Learning and as they implement future initiatives.

DEDICATION

This dissertation is dedicated to my mother, Barbara Martin. Mother always believes in me even when I find it difficult to believe in myself. She is always there for me, saying what I need to hear instead of what I want to hear. When I am faced with life obstacles or difficult decisions, mother through her wisdom and spiritual beliefs teaches me to trust in GOD and to lean not unto my own understanding.

Mother, I want to thank you for the very special gifts you have given me all my life. You have given me the gift of sweet childhood memories. You have given me the gift of dreams: the ones you have made come true and the ones I achieved myself because of your encouragement. But most important of all, you have always given me the gift of your love, the most precious gift of all. It is with this gift that I have accomplished this goal. Thank You.

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Finally to my wife Laura. She endured many nights alone. Often she felt unappreciated and second or third in line for my attention. But somehow she saw the importance of this task to me and her support was unwavering. Now that this task is complete, I look forward to continuing to grow with her.

“Oh, give thanks to the LORD, for He is good!

For His mercy endures forever”. ~PSALM 106: 1

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CHAPTER ONE

Introduction

Reform is “the purposeful and systematic altering of a range of beliefs, conditions, practices, and traditions to attain a specific end” (Sambas & Schenkat, 1990). Educational reform fundamentally redesigns teaching and learning, builds school-wide vision and has the capacity to identify and solve problems, and understands that participatory and collegial school organizations generate commitment for reform (Newmann & Clune, 1992). Restructuring schools works to preserve and build upon what has been successful in the education of children while redesigning those aspects that have failed (Harvey & Crandall, 1988). Each school is redesigned to achieve its individual mission while reflecting the realities, needs, beliefs, and values of the community.

Educational reform is about improving what “goes on” in schools. Reforms often target classroom instructional issues, such as content and pedagogy, or they focus on larger organizational aspects, such as the structure and decision-making processes of schools. Interestingly, although their scope of work varies widely, nearly all educators face a similar set of challenges when attempting to lead reform. Whether reform involves minor changes in classroom practices or major administrative restructuring, successful reformers must adopt a similar set of strategies to overcome obstacles.

Standards-Based Movement

The term standard refers to a level of performance required to receive some sort of certification (Eisner, 1994). In a sense, standards define the knowledge and skills needed to confer success. Standards in education are thought to perform this function.

“A fundamental tenet of the current educational reform effort is the belief that American schools desperately need standards” (Eisner, 1994, p.8). Since the signing of Goals 2000, national professional groups, state departments of education, and school districts have been developing frameworks of content standards and student performance standards to clarify what, and how well, all students should learn (Harris & Carr, 1996). This push to define “what students need to know and be able to do” is powered by

increasing public pressure for accountability in schools, and by politicians' need to appear to be doing something about it. Lewis (1995) contends that the notion of national, state, or district-wide standards for what students learn in public schools is the premier item in educational reform today. These standards are intended to provide educators with guidelines for curriculum and teaching that will ensure students have access to the knowledge believed necessary for their later success (Cross & Joftus, 1997).

The call for student standards is evident throughout the United States. As proposals for national tests are debated at the federal level, state boards of education have become more involved in developing standards and assessments at the state level. In 1995, the Virginia Board of Education adopted new Standards of Learning for grades K-12 in four core subject areas: mathematics, science, English, and history and social studies. The new standards set targets and expectations for what teachers need to teach and what students need to learn. The requirement is designed to provide greater accountability on the part of public schools and to give local school boards the autonomy and flexibility to offer programs that best meet the educational needs of students.

Embedded in reform efforts is the undeniable call for change. According to Cross & Joftus (1997), the amount of educational change required to implement academic standards represents a significant threat to educators and therefore to the success of the standards movement. This large-scale educational reform will require many fundamental changes in the way educators work. Not surprisingly, the literature review suggests that such change will meet with more than a little resistance and concern.

Battles are gained or lost because the winner is stronger or the loser is weaker. But in the fight between reform and resistance it is not the strength of reform, but the virtues of reason and circumstance, which overcome resistance. Reform is no boxing match, nor football game, nor a contest between past and future, nor a battle of good and evil. Reform is made possible by the importance of the circumstance that allows reformers to claim that their point of view has inevitability of logic (Hobhouse, 1986, p. 72).

Achieving the maximum benefits of educational reform will require minimizing the resistance level of those involved. Managers of change must understand the nature of resistance behavior, attitudes, and feelings, and understand the relationship between these and other factors, which influence them. Using this knowledge, resistance to change can be minimized and acceptance and support can be maximized (Judson, 1991).

As with any change, the Standards of Learning will meet resistance. In order to facilitate this change, reformers must understand the change process and how it relates to the adoption of the innovation. The Stages of Concern Questionnaire was used to assess the practitioners' attitudes and concerns about the adoption of the Standards of Learning.

Purpose of the Study

The purpose of this study was to determine the Stages of Concern of central office instructional administrators, building level principals, and teachers in Superintendents' Region Seven of the Commonwealth of Virginia during the implementation of the Standards of Learning. The Concerns Based Adoption Model (CBAM) and instrumentation were used to measure the Stages of Concern of the individuals involved in the adoption of the educational innovation.

Conceptual Model of Change

The Conceptual Model of Change illustrates the process of change and how the components of leadership theory and organizational theory relate to the implementation of educational reform. The model also depicts the Concerns Based Adoption Model as the instrument used to assess the Stages of Concern of school division instructional personnel in Superintendent's Region Seven in Virginia. This model was also used to organize the review of the related literature in Chapter Two.

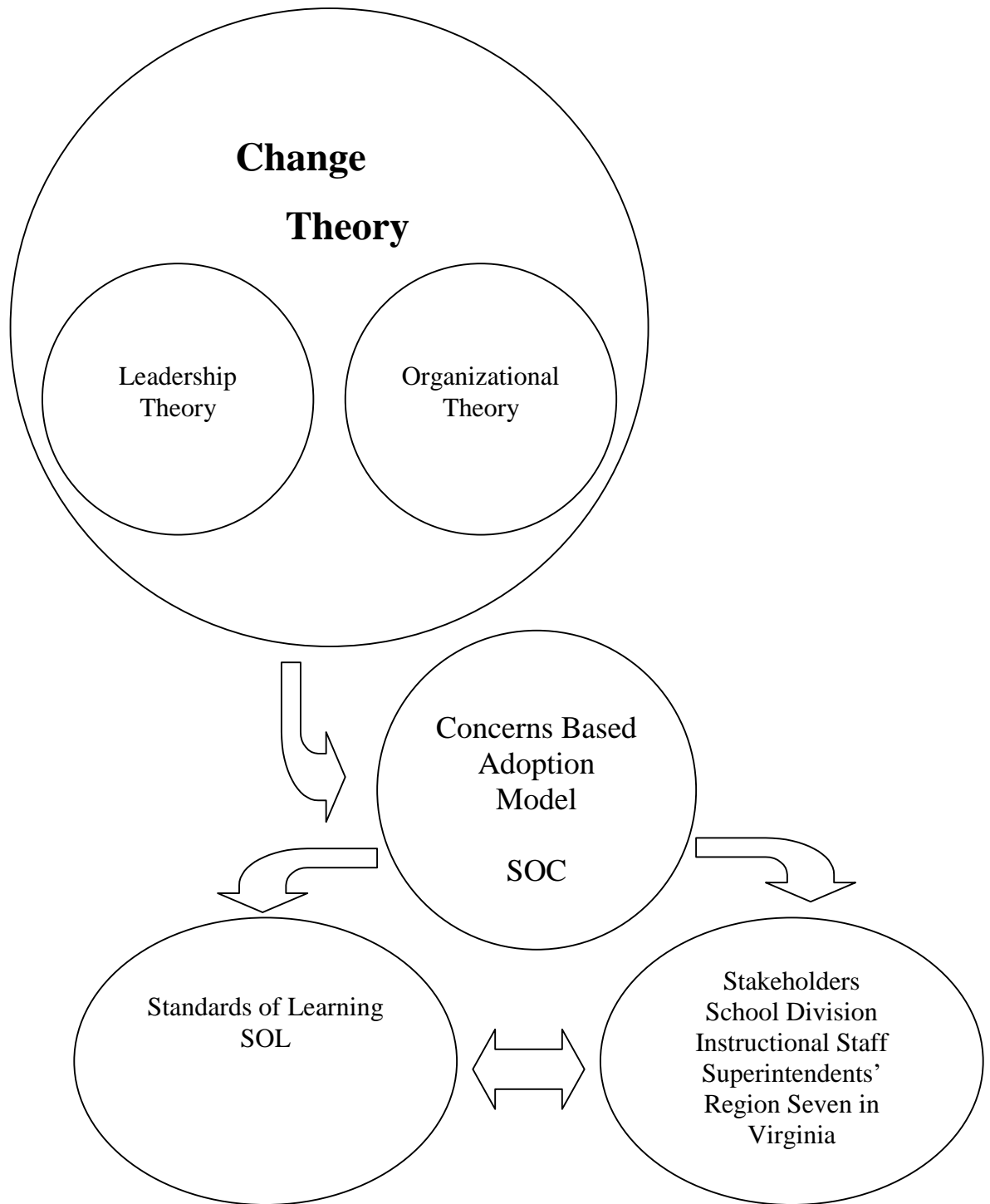


Figure 1: Conceptual Model of Change

Research Objectives

This study addressed three issues related to the implementation of the Standards of Learning in Superintendents' Region Seven in Virginia:

1. To determine the Stages of Concern profiles of central office instructional administrators, elementary, and secondary building level principals, elementary, and secondary teachers who administer SOL Tests, and elementary and secondary teachers who do not administer SOL Tests.
2. To determine if there were significant differences between the independent variable position teachers who administer SOL Tests and teachers who do not administer SOL Tests with seven levels (Central Office Instructional Administrators, Elementary Principals, Secondary Principals, Elementary Teachers who administered SOL Tests, Elementary Teachers who did not administer SOL Tests, Secondary Teachers who administer SOL Tests, and Secondary Teachers who did not administer SOL Tests) and the seven dependent variables of: Awareness, Informational, Personal, Management, Consequence, Collaboration, and Refocusing.
3. To collapse all administrators, all elementary teachers, and all secondary teachers into three groups forming three independent variables (Administrators, Elementary Teachers, and Secondary Teachers) and determine if there were significant differences between the independent variable position/grade level as redefined and between the seven dependent variables of: Awareness, Informational, Personal, Management, Consequences, Collaboration, and Refocusing.

Significance of the Study

There are many factors that affect the educational reform process. To bring about more effective educational change, it is necessary to know the Stages of Concern of the individuals involved in the implementation of the innovation. Incorporating this knowledge with the theory of change will provide reformers the underlying concept of what should be done to make the adoption more successful. Fullan (1991) stated that:

...To implement programs successfully, we need better implementation plans; to get better implementation plans, we need to know how to change our planning process; to know how to change our planning process, we need to know how to produce better planners and implementers (p. 93).

To produce better planners, it is necessary to explore how implementers of educational reform perceive the change. This understanding of change as related to the reform would also lead policymakers to a better appreciation for the complexities of the very human process of change and the demands that the process imposes on the educational system at the local level.

By examining the concerns of school instructional personnel toward educational reform, baseline data will be generated that will provide information for policymakers in the future. This information will afford reformers and practitioners the opportunity to work collaboratively toward the common goal of improving the educational system.

Limitations

1. The morale of the individuals involved in the study will not be addressed nor are they considerations in the findings.
2. The inclusion of a collection of Southwest Virginia school divisions that were primarily located in rural communities.
3. The state of Virginia has mandated school improvement legislation through educational reform; therefore, this study will not examine the need for education reform or the implications of change.
4. When recommendations are made, ideal situations will be considered. School divisions with limited financial resources will need to adjust their plans and reactions or look for additional resources.

Definition of Terms

The following terms have been defined for the study.

Concerns-Based Adoption Model – A model, according to Rutherford, Hall, Huling (1983), designed for "... the development of knowledge about and new

understandings of the change process and the provisions of tools and assistance for practitioners involved with the implementation of change in schools” (p.133).

Reform – The purposeful and systematic altering of a range of beliefs, conditions, practices, and traditions to attain a specific end (Sambas & Schenkat, 1990).

Planned Change –the conscious, deliberate effort to improve systematic operations (Havelock & Havelock, 1973 and Gross, Giacquinta, and Bernstien, 1971).

Leadership - Leadership is multidimensional. It includes values, goals, beliefs and decision-making that influence practices and behaviors. Kouzes & Posner (1995) define leadership as the art of mobilizing others to have the desire to struggle for shared aspirations.

Concerns – A term Hall (1979) uses to “... represents a composite description of the various motivations, perceptions, attitudes, feelings, and mental gyrations experienced by a person in relation to an innovation” (p. 203).

Stages of Concern – Relates to the feelings, perceptions, motivations, and attitudinal dynamics of individuals involved in implementing an innovation. These concerns change as users progress through the stages and become increasingly skilled in using the innovation (Hall, George, & Rutherford, 1986).

Implementation – As defined by Dennison (1993) “... all of the events, actions, and decisions involved in putting an innovation to use” (p.11).

Levels of Use – Describes how performance changes, as individuals become more familiar with an innovation and more skillful at using it (Hall, George, & Rutherford, 1986).

Profile – Describes the concern level (highest to lowest) of the participants using the Stages of Concern Questionnaire during the adoption of an innovation (Hall, George, & Rutherford, 1986).

Standards of Learning – Virginia’s newly mandated educational reform initiative that directly aligns assessment with instruction by testing students in the four major core areas: mathematics, English, science, social-studies and history (Wahlstrom, 1998).

Organization of the Document

The research is presented in the standard format recommended for research articles and dissertations outlined by Borg & Gall (1989). Chapter One provides an introduction to the concept of educational reform, the significance and purpose of the study, research questions, definitions applicable to the study, and the organization of the research.

A review of the literature is contained in Chapter Two and begins with a brief description of educational reform and a historical perspective of the initiatives. Chapter Two focuses on the process of change and how the components of leadership theory and organizational theory relate to the implementation of educational reforms. This section, in particular, provides the basis for the research conducted in this study.

Chapter Three contains a description of the research design, sample population, instrument, content and reliability of the instrument, data collection, and data analysis procedures of the study.

A discussion of the research findings, including demographics of the study participants, an analysis of the responses among the role groups, an analysis of the responses within each of the role groups, and a summary of the responses to the open-end question, are included in Chapter Four. In Chapter Five, a summary and discussion of the results of the study, conclusions, implications of the study, and recommendations for future research are included.

CHAPTER TWO

LITERATURE REVIEW

This chapter presents a review of the literature on educational reform initiatives since the inception of *A Nation at Risk*. This chapter specifically addresses the change process and how leadership and organizational roles affect the process of change at the local level. The Concerns Based Adoption Model (CBAM) and other innovation adoption theories will also be discussed in this section. The environment for change along with barriers to change and issues of trust will also be analyzed in detail. Each of these topics provides support for the concept and complexities of implementing educational reform initiatives at the local-level.

Historical Perspective

This summary of the historical context of educational reform provides a chronological listing of the events that initiated change in public education after the publication of *A Nation at Risk*. Educational reform is an attempt to redefine and reconfigure an entity that is complex, resistant to change, and bureaucratic by nature in order to meet the changes occurring in society (Fullan, 1982).

For most of the 20th century, reformers have been asking whether schools are adequately preparing students to assume the responsibility of employment, citizenship, and family life. During the 1980s, much attention was paid to the role that schools played in preparing the nation's future workforce. In particular, there was a belief among some that the skills of American students were falling behind those of students in other countries, perhaps jeopardizing our nation's future competitive strength. The fear of America declining touched far more people than ever before, and they seemed to be willing to do something about it. People made the connection between education and economics, they realized that school failures were tied to economic failures and that it was time to invest in America's children. At this time, educators initiated more reform efforts to improve the nation's education system.

An emerging awareness of a national crisis was hitting with full force in the early 1980s. There was widespread dissatisfaction with the state of American education. Drugs were far too prevalent in schools and in the homes of children (Lytle, 1992). Students became disengaged and disenfranchised from school and from society (Fernandez, 1991). Large numbers of teenagers continued to drop out of school (O'Neil, 1990). American students performed poorer than students did from other nations on international achievement tests (National Association of Secondary School Principals, 1992). Public schools were being criticized for failing to meet the nation's educational needs. This criticism, from all facets of society, had a common thrust. It was believed that American students were not being properly prepared for their endeavors. According to Chubb & Moe (1990), America's schools were failing in the core academic areas, and, most debilitating of all, they were not teaching students how to learn.

New studies and commission reports criticized education and argued the urgent need for change. *A Nation at Risk*, the best known and most influential of the national reports, argued that the United States was *at-risk* in the sense that its "once unchallenged preeminence in commerce, industry, service, and technological innovation was being overtaken by competitors throughout the world." The commission observed that evidence of decline has been a "rising tide of mediocrity" in the schools (National Commission on Excellence in Education, 1983, p. 5).

In 1986, the Carnegie Task Force on Teaching as a Profession released *A Nation Prepared: Teachers in the 21st Century* (Carnegie Task Force on Teaching as a Profession, 1986). This report stressed the urgent need to improve education for the nation's growing proportion of low-income and minority students and the importance of teaching "complex, non-routine intellectual" skills. Like *A Nation at Risk*, the Carnegie Report recommended increasing teachers' salaries and establishing a career hierarchy so that "lead teachers" exercise leadership responsibilities in the schools. The report also called for incentives to increase the pool of minority teachers. Undergraduate education majors should be replaced with a new "professional" curriculum at the graduate level. Teachers should be given more control over their work environment and in turn should be

held accountable for student performance. Finally, the report proposed the establishment of a National Board certification, as in medicine and law, to set high standards for teachers and to certify those who met them.

At the close of the decade, American educators organized task forces with the purpose of identifying what was wrong with our schools and how to repair them. State legislatures enacted laws that specified curricula and course contents, defined prescribed teaching methods, and established more stringent standards for teacher certification (Elmore & Fuhrman, 1990). States tightened their standards for high school graduation and set up new testing programs for students; they required difficult teacher competency tests, changed their teacher certification requirements, and college admission standards were instituted (Elmore & Fuhrman, 1990). This program of reform promised a brighter future for the nation's schools.

Changing America's schools is difficult. According to Sarason (1982), one may know a good deal about schools and most of it may be based in facts and truth, but it is not always in sequence that such knowledge confers any validity on one's conception of how to change schools. The change process arouses different reactions in different people and arouses an array of protective and defensive attitudes. Therefore, one cannot assume that the knowledge one has of schools is a sufficient basis for conceptualizing what the change process will create or encounter. "By its very nature, the change process creates and encounters obstacles not ordinarily observed in the pre-change period" (Sarason, 1982).

Educational reformers contend that much of the reform movement of the 1980s was piecemeal and largely failed (Cuban, 1990; David, 1991b). These reforms lacked coherence and coordination and sent mixed messages to districts about priorities (Firestone, Fuhrman, & Kirst, 1990). Critics of the reform movement maintain that incremental changes were made simply to repair or renovate education by adding "more of the same" to existing structures and programs to make them more efficient and effective (Cuban, 1992). These efforts emphasized content and ignored process (McLaughlin, 1990). Negroni (1994) contends that self-interest in maintaining existing

structures was one of the major failings of reform efforts, resulting in little change in the classrooms.

By 1990, nearly a decade after *A Nation at Risk*, the nation's educational performance was almost unchanged. "Few programs were implemented successfully as planned; most had few-if any-effects on students; and teachers and administrators became disillusioned" (Tushnet, 1991). Darling-Hammond (1993) claims that many of the previous reform efforts failed because no investments were made in teacher knowledge and in increasing school capacity for responding to student needs. Cuban (1990) attributes the repeated pattern of return to reforms to the failure to diagnose problems and promote correct solutions. Pogrow (1996) argues that reformers, academicians, and researchers who develop ideas and rationales for the reformers' pet reforms are the biggest problem in education.

Reformers proclaim that there are problems with the educational establishment, problems with society, and problems with the political structure and with current practice. In essence, they say that there are problems with everything surrounding education, except the reformers and their reform proposals. Reformers feel that their solutions would work, if only practitioners would support the reform. Therefore, when proposed reforms fail, they feel the practitioners are at fault (Tushnet, 1991).

Fortunately, after spending hundreds of millions of dollars and equal numbers of man-hours to reform America's schools, research suggests that some improvements have been made (Cetron & Gayle, 1991). A 1994 study of 820 high schools nationwide shows clear links between school restructuring and improved student learning (Lee & Smith, 1994). Bracey (1992), and *The Sandia Report* (1992) provided interesting documentation that American education is better than it has been in the past and that public schools reached more students, provided more services, and provided positive educational outcomes at a higher-level. Thus, meaning that education reform should continue and the work should be extended into the future.

The lessons learned will guide reformers favorably through the change process. Reformers must understand that initiating change is a difficult and complicated

procedure. The direction one uses to lead change is crucial in determining success. Before reform can be brought to fruition strong leadership must be in place and clear, precise goals established. For these reasons, educators must learn from past mistakes (Tushnet, 1991) and from research on how people learn and how organizations change (David, 1991a). Reformers must discard those ineffective practices and policies and build on their successes (Tushnet, 1991) so that restructuring efforts do not fail and set them back even further. Reformers must have the proper training and the flexibility to alter strategies and redesign the organization. To insure longevity of the reform initiative, reformers must assess the performance and manage the resources of the reform. By recognizing these prophecies, district-level leaders can successfully lead educational reform initiatives.

This literature review discusses the educational reform and the change process. More specifically, the research presents factors that influence the implementation of change at the local-level. This section provides an underlying concept of what local-school divisions should do when implementing and sustaining educational reform. Issues that affect the change process such as: the environment for change, barriers to change, and trust are also explored. The “Change through Effective Leadership” portion of the paper describes the roles school personnel have as change agents when implementing educational reforms at the local level. The “Change through Organizational Restructuring” section discusses the philosophic concepts of decision-making, school based management, and systemic reform along with the knowledge of the change process. Each of these topics provides support for the concept and complexities of implementing and sustaining educational reform initiatives on the local-level. The Concerns-Based Adoption Model and other innovation adoption theories are explained in this portion of the paper.

Change Process

Much of the push for change in education stems from recognition that the nation’s social and economic structures have changed. Changes in traditional family structure, increases in child poverty, inadequacy of social-welfare and social-service programs, and

decreased sense of civic responsibility are among factors that are directly or indirectly placing new expectations on educators (Conley, 1993). Economic forces and educational equity issues have combined to heighten calls for improved education for all students. These societal changes have education essential to livelihood (Schlechty, 1990). As workers are increasingly expected to endure multiple career changes, it is necessary for schools to emphasize the importance of lifelong learning, strengthen students' thinking and problem-solving skills, and increase their adaptability.

Havelock and Havelock (1973) and Gross, Giacquinta, and Bernstien (1971) define planned changes as a conscious, deliberate effort to improve systematic operations. Planned change in schools is also a sociopolitical process involving individual, classroom, local, regional, and national factors at work in interactive ways (Fullan, 1982). Furthermore, Fullan's (1982) review of research and innovation indicates that change consists of three distinct phases: initiation, when a decision is made and plans are developed; implementation, when the change is put into practice; and incorporation, when the practice becomes routine (or may even disappear).

These societal and global changes in education reflect reform and restructuring efforts impacting the school organization and its purpose of existence. Understanding what change is and how schools change can determine the success of school restructuring. Productive educational change roams somewhere between over-control and chaos (Parscale, 1990). The solution lies in better ways of thinking about, and dealing with, unpredictable processes. Restructuring cannot occur without addressing the change process at the individual level. Fullan (1991) echoed this concept by stating, "The crux of change is how individuals come to grips with this reality. We vastly underestimate what change is and the factors and processes that account for it" (p.33). To bring about change in schools, and to a large degree educational restructuring, educational change must first be addressed at the personal level. Change must satisfy the individual person. Therefore, to change individual behavior within the organization, which subsequently leads to organizational restructuring, individuals must relinquish old behaviors and substitute new ones. Similarly, sustaining the change process in organizational restructuring requires

congruence of personal values with organizational goals (Hallinger & Hausman, 1993). Rosenholtz (1989) concluded:

Educators are willing to change if they perceive the ideas themselves to be educationally sound; if they are able to adapt the broad policy framework of the change to their particular situation; if there is sufficient clarity about their role expectations; if there is a reasonable assurance that the political climate will be stable enough for the changes to remain in force long enough to be implemented thoroughly; and, experienced in a manner that enables them to develop and sustain the internal capacity for change (p.17).

Environment for Change

The Greek word “metanoia” means “a fundamental shift of mind” (Senge, 1990). This concept of change is what we need when initiating educational reform. The way that teachers are trained, the way that schools are organized, the way that educational hierarchy operates, and the way that education is treated by political decision-makers results in a system that is more likely to retain the status quo than to change (Senge, 1990). Depending on the circumstances, the change process may result in defensiveness, superficiality, or short-lived pockets of success (Senge, 1990).

The answer for change does not lie in better reform strategies. It is unrealistic to have an educational environment in which change is continuously expected to endure from one program to the next. According to Fullan (1993) experts are dealing with change not just in relation to the latest policy, but as a way of life. Therefore, learning organizations are needed in relation to the discovery that change in complex systems is nonlinear and full of surprises.

Change is necessary for this to become possible. As the twenty-first century approaches, society expects its citizens to be capable of dealing productively with change throughout life, both individually and collectively. Education is the stairwell of hope to potentially contribute to this goal. Yet, educators are resistant to change. The word *change* evokes predominantly negative responses from most people and therefore is a difficult concept to *sell*. Leibensperger (1994) believes:

Fear in the workplace is a barrier to innovative change... bureaucratic systems, which reward adherence to the status quo and discourage attempts at systemic change, ... feed the fear and mistrust permeating our work place... many people in the public schools fear change and often distrust those individuals who do not. Even if changes are research-based and earnestly enacted, the inherent mechanisms in bureaucracies for squelching growth may manifest themselves in the form of censure, disdain, or nonsupport (p. 105).

To break through this impasse, educators must view themselves and be viewed as experts in the dynamics of change. To become experts in the dynamics of change, educators-administrators and teachers alike must engage in continuous corrective analysis and action of change. "Productive educational change at its core, is not the capacity to implement the latest policy, but rather the ability to survive the vicissitudes of planned and unplanned change while growing and developing" (Fullan, 1993).

Barriers to Change

Desiring reforms and actually making them happen are a different matter. The movement to restructure schools in America is threatened by a number of factors (Timar, 1989). These threats include a perception that restructuring is the idea of a small group of educators. Another threat is the potential fragmentation and competition among individual projects and programs as each pursues a different aspect of the reform agenda. In some states, restructuring has become politicized and regulated to the point that policy proliferation creates a bureaucratic nightmare that inhibits real change from taking place (Gardner, 1995).

There are many barriers to change and the strategies to overcome them are not fully understood. Fullan (1982) delineates both the characteristic and the systemic nature of educational change. Among the barriers to change according to Anderson (1996) are the beliefs and values on the part of everyone involved, the lack of teacher preparation in the particular area of reform, and the need to reeducate students to their role in learning to constructively participate. The primary barriers of change are the operational and cultural belief including value systems and priorities of the stakeholders. Another barrier is the

tension of instituting the *new* while operating in the old educational system (Anderson, 1996). The more diverse the beliefs and values are, the more difficulty the change will encounter. Change requires resources, commitment, knowledge, and skill. Moreover, success depends upon the appropriate timing and correct setting. Attention must be appropriate to meet the needs of change (Anderson, 1996).

Trust

Recent research on state reform initiatives reveals that the lack of trust is an enormous problem and may be the most difficult to overcome if reform efforts are to be successful (South-Eastern Regional Vision for Education, 1994). A lack of trust emanates from state leaders who doubt the ability of local school board members and superintendents to successfully manage schools. School board members and superintendents, in turn, lack trust in principals and teachers to make appropriate decisions about how best to educate their students.

Trust among stakeholders must be established in order to prepare them for change (Breedeson, 1993; Hoffman, et al., 1994; Murphy, 1991). Trust must be pervasive across all levels of the school system. It must begin at the local level with the superintendent focusing on change and creativity. A sense of trust will allow the superintendent to provide a climate that invites the staff to challenge old rules and paradigms, which represents a substantive change in the organizational culture (Baily, 1992).

Principals and teachers must have trust in and respect for each other (Corcoran & Rouk, 1985; Evans, 1993; Hoffman, et al., 1994). They must also have trust in the restructuring processes themselves and that the changes will have a positive effect on the desired outcomes (Breedeson, 1993). A sense of trust can be nurtured by attending to the relational aspects of change as opposed to the technical aspects of change, by recognizing and accepting resistance to change, by allaying concerns and fears about the unknown, through developing strong working relationships among groups, and by affirming each department's status as part of the school.

The next section discusses the roles and relationships that educational personnel at the local level must possess to provide the necessary support and leadership for

successful educational reform. An overview of the responsibilities of school superintendents, building level principals and teachers as change agents will be provided.

Change through Effective Leadership

Leadership is multidimensional. It includes values, goals, beliefs and decision-making that influence practices and behaviors. Kouzes and Posner (1995) define leadership as the art of mobilizing others to have the desire to struggle for shared aspirations. This section of the paper will discuss the importance of leadership in initiating change.

Strong leadership ensures that initial reform objectives are achieved. School reformers usually begin with high levels of energy and commitment to the process. Unfortunately, institutionalizing change is a long, arduous process. Over time, competing responsibilities and the slow pace of positive gains deplete enthusiasm. In addition to making key decisions and following through on their implementation, effective leaders build consensus, promote buy-in, and delegate authority among participants.

The appropriate leadership type must be present for educational reform to succeed. There are many ideas regarding the appropriate characteristics a leader must possess to lead change. Evans (1993) inferred that authentic leadership was needed to lead change "... leaders must no longer aim at manipulating subordinates, but at motivating followers who invest themselves actively and become self-managed, engaged participants" (p. 16). Individuals in the upper levels of an organization must demonstrate support for and understanding of the need for change (Thompson, 1994). To develop the trust and skills necessary to work towards change collaboratively, the leader must reflect on his or her personal core beliefs (Covey, 1991).

Leadership is the driving force for change. As educational change takes place the roles and responsibilities of school leaders must adjust to the transition. In order to bring educational reform initiatives to fruition, school leaders must be change agents. They must use innovative strategies to guide and direct their followers through the reform process.

Superintendents as Change Agents

Superintendents are instructional leaders of the school district. The duties superintendents face under systemic reform include establishing organizational vision and mission, planning and coordination, facilitating change, spanning institutional gaps, communication, resolving conflicts, and improving organizational efficiency (Anderson, 1993; Fullan, 1985). Superintendents must be able to exercise indirect (specialized) leadership as the educational leader of the district, while exercising direct, more generalized leadership with the school board and community. The ability to do both effectively is an uncommon gift that is nonetheless critical in leading a significant reform effort in a school district (Gardner, 1995).

Three changes must occur to prepare superintendents to be leaders in fundamental education reform (Thompson, 1994). These changes include revitalizing administrative preparation programs, improving the working conditions of superintendents, and clarifying the superintendents' and school board relationships. Research shows that change thrives in a symbiotic relationship between the school and the district office (Shoemaker, 1986) in which the district supports change through the provision of flexibility and communication and access to the superintendent's office (United States Department of Education, 1991). The role of the superintendent is to support and to provide leadership for educational reform initiatives by initiating collaborative planning processes around a shared vision. By developing and realigning policies to protect and govern educational reform plans, redefining the responsibilities to support and to enhance the educational reform process, and by maintaining personnel committed to the change process, a superintendent can facilitate change (Anderson, 1993; Eastwood & Louis, 1992; Fullan, 1985; Murphy, 1991). In essence, "our image of bold leadership and the people who exercise it" must be altered (Thompson, 1994).

Principals as Change Agents

Many studies have stressed the principal's role in carrying out innovations (Berman & McLaughlin, 1978). Principals are more aware of the complex relationships in schools because of their interactions with the entire school community. Principals are

administrative officers who are responsible for school operations. Principals must function as instructional leaders and actively support change. It is the role of the principal to ensure a positive climate to gain commitment to reform (Caldwell & Wood, 1988).

Principals must develop a sense of trust, provide resources and information, and create synergy and ownership among staff (Aronstein, Marloe, & Desilets, 1990; Cherry, 1991). The principal must network to link the staff to others involved in the reform process (Goldman, Dunlap & Conley, 1993). As the chief catalyst for change in schools (Huling-Austin & Stiegelbauer, 1995) the principal performs four essential leadership tasks that can facilitate any change efforts: obtaining resources, buffering the project outside interference, encouraging staff, and adapting standard operating procedures for the project (Firestone & Corbett, 1988).

Although successful change will most likely occur when the teachers, principal, and superintendent combine efforts to accomplish tasks, the principal, by virtue of placement and role, may well be the key to educational change. Research suggests that teachers' attitudes toward change were significantly related to the principals' knowledge of the educational change and understanding of their role (Sarason, 1982). Some evidence also exists that principals' moral support and active participation are key elements of an effective support system during implementation (Sarason, 1982).

Teachers as Change Agents

Teachers in educational reform assume new roles and responsibilities such as scheduling, developing curriculum, participating in and conducting staff development, and team planning and coordination, in addition to the prior responsibilities for instructing students (Tushnet, 1991). A Rand change-agent study found teachers' commitment to an innovation important for project implementation (Berman & Pauley, 1975). According to McLaughlin and Marsh (1978) the main reason many Great Society reform efforts failed was that the programs seriously underestimated the importance of teacher involvement in implementing programs and their training needs. In a study of unsuccessful implementations, McKay and Nelson (1980) found that programs are most likely to fail without teacher training and support. Olson (1980) believes that difficulties

with carrying out new programs have led to arguments for viewing teachers as more active agents in the innovation process.

Conley (1993) provided valuable information on how teachers responded to specific educational innovations. Involving teachers in the process of making decisions about educational reform, the principal increases the commitment to implementation, assists teachers in developing the skills to implement change, and increases the likelihood that appropriate changes will be made. In addition to addressing readiness and implementation concerns, Elmore (1991) suggested that prior to launching a project or activity, it would be prudent to acknowledge publicly that large-scale change was being contemplated and to spend time getting to the point where staff members would accept the need for change.

Risk-Taking and Innovation

School districts and schools are implementing an array of multiple innovations and policies simultaneously. Thus, teachers and administrators “need a protected atmosphere in which to develop and test new, complex authority relationships and school practices” (Macphail-Wilcox, Forbes, & Parramore, 1990, p. 25). Restructuring reform is so multifaceted and complex, that solutions for particular settings cannot advance. The complexity of the situation paired with complex implementation plans creates an awkward process, which will become cumbersome and usually wrong, making it difficult for the stakeholder to remain in an enthusiastic, innovative mode. Thus, a sincere invitation to change that encourages people “to act on their knowledge and understand what needs changing, and to take responsibility for their successes and failures” (Elmore, 1988, p. 9) is perhaps the most critical aspects of leadership at the state, district, and school level (David, 1991b).

Meaningful educational reform implies a significant change in the interaction among all stakeholders. To achieve such reform requires major changes in the traditional ideologies of education. Policy makers, politicians, and educational researchers must possess a strong vision for reform. School staff must be encouraged to dream and be creative (Fernandez, 1991). Schools should be non-threatening environments that reward

risk-taking and encourage experimentation and even failure, to not just do more, but to do better and different (Carruthers, 1990; Fernandez, 1991). Without such an environment, the capability of the school and the district to improve may be permanently damaged (Corcoran & Rouk, 1985).

It is only through this collaborative environment that fosters ongoing conversations among teachers (United States Department of Education, 1991) that teachers will be truly empowered to make the necessary changes in their classrooms (Short, 1994). However, the United States Department of Education (1995) cautions educational leaders that the mere existence of mechanics to improve communication and collaboration among teachers does not guarantee that such involvement will take place. Personal commitment on the part of teachers and administrators as well as organizational changes must also occur if productive collaboration among school staff is to flourish. The next section discusses educational reform through re-organization. The importance of decision-making, school-based management initiatives, systemic reform, and knowledge of the change process are discussed as they pertain to educational reform.

Change through Organizational Restructuring

Changes must be made in the structure of schooling that will lead teachers to seek changes in instruction rather than imposing changes in instruction on them (Education Commission of the States and the Rockefeller Foundation, 1990). The change effort should include all individuals who have a stake in the educational system. Eastwood and Louis (1992) believe the single most important factor for successful restructuring is a “cooperative internal environment,” where stakeholders work collaboratively to solve problems and resolve conflict through extensive communication with all constituency groups.

Decision Making

Change cannot occur if the appropriate decisions are not made to guide the process. Traditionally, authority concerning school policies has proceeded in a top-down fashion, from the school board through the superintendent and central office to the principal and teachers. Unfortunately, most school divisions continue to operate using

hierarchical, bureaucratic decision-making structures and processes. This “top down” structure is problematic to the change process because superintendents and boards of education dictate the finished product to the school. In the process, teachers find themselves belonging to competing territorial units within the school and not as members of a cooperative team.

According to Gardner (1995) the Open School and the Back-to Basics movements were not successful because they were developed at the top and impressed on those below. In all the attempts of these reforms, Gardner (1995) states that teachers and administrators on the front line were not appropriately involved in the change process. He believes they were left out of the decision-making loop at critical points. As a result they had less than optimal commitment to the change efforts and felt limited responsibility for implementing the proposed innovations and making them work.

School-Based Management Initiative

Many educational reforms involve a movement toward teacher empowerment-increasing teacher’s participation in decisions that affect their own work and careers. This is called school-based management, a system in which many decisions about curriculum, instruction, staff development, allocation of funds, and teaching assignments are made at the level of the individual school. Working collaboratively, the school’s teachers and administrators develop their own plan for the school’s future.

The assumption underlying school-based management is the idea that people who share in responsibilities and decisions will believe in what they are doing and will work more effectively toward common goals. School-based management is “a means through which school-level decision-makers can implement various reforms that can improve teaching and learning” (Wholstetter, 1995). School-based management provides a sincere invitation for schools to change and to take risks (David, 1991b).

The implementation of school-based management struggles because there is little connection between school-based management and the reform of curriculum and instruction. School governing bodies are too bogged down with issues of power, which leaves little time and energy to confront issues of school improvement (Wholstetter,

1995). The fate of school-based management rests especially on the relationship between principals and their teachers, on the willingness of teachers to take responsibility for directing their own behavior, and on the amount of extra time teachers are willing to devote to working out problems and reaching consensus (Brandt, 1989).

Systemic Reform Approach

Systemic reform is a broad and often ambiguous concept. However, if it is viewed *not* as a fast-acting formula to cure all of education's ills but as a philosophy that advocates reflecting, rethinking and restructuring, it has great potential to improve education. (Thompson, 1994)

Education restructuring should not be discussed without also briefly examining systemic reform. Systemic reform can have a drastic effect on schools (Thompson, 1994). This type of reform requires change on many levels, but emphasizes changes at the school site. However, Conley (1993), notes that school level changes are the most difficult to achieve because they influence what and how subjects are taught as well as how progress is measured and evaluated.

When changes are being introduced simultaneously, restructuring and reform activities must be coherent; they must be compatible with and reinforce each other, rather than constituting isolated fragments that divert time and energy from priority goals. Recognizing this, reformers concerned with bringing about systemic restructuring and reform must identify reforms that are sufficiently comprehensive and coherent to be successful in practice (Thompson, 1994).

Knowledge of Change Process

To change an organization's structure, Schlechty (1990) says, "one must attend not only to rules, roles, and relationships, but to systems of belief, values, and knowledge as well. Structural change requires cultural change." In other words, an organization must be *re-cultured* before it can be restructured (Schlechty, 1990). Unfortunately, many would-be change agents seem unaware of the impact of school culture on the process of change. Sarason (1990) posits that the history of education reform is littered with examples of interventions that failed or had adverse effects because those involved had

only the most superficial and distorted conception of the culture of the school they sought to change.

Knowledge and understanding of the change process, or the lack thereof, will determine the success or failure of restructuring efforts (Peca, 1994). Fullan and Miles (1992 p. 245) believe that “serious education reform will never be achieved until there is a significant increase in the number of people – leaders and others alike – who have come to internalize and habitually act on basic knowledge of how successful change takes place.” According to Hall and Hord et al. (1987), factors that can powerfully affect an educator’s ability to manage school change are culture, leadership, and readiness. Readiness is stressed in the change process by Hall and Hord (1987), as well as Fullan (1991) who stated, “Above all, planning must consider the pre-implementation issues of whether and how to start, and what readiness conditions might be essential prior to commencing” (p.63). Conley (1993b) added that the conditions within the change process, such as movement from bureaucracy to community, and from isolation to collaboration involving cultural changes that could not be overlooked. The process of school restructuring could not be thought of simply in terms of change in organizational structure, or implementation of isolated projects and programs. Systems were made up of interdependent component parts that shifted or adjusted to accommodate demands of the environment, but did not necessarily coordinate these adjustments. “Under conditions of uncertainty, learning, anxiety, difficulties, and fear of the unknown are intrinsic to all change processes, especially at the early stages” (Fullan, 1993, p. 25). As we progress through reform attempting to sustain the real objective, the dynamic complexity will sometimes be overwhelmingly frustrating and bad; and the situation cannot be changed. Stakeholders who learn to control their inner experiences, while dealing with the positive and negative forces of change will come to realize that change is a journey. Productive educational change will always be, because it is a process.

Change does not happen immediately, but occurs over a period of time. When individuals develop their own interpretation of the innovation terminology, the innovation is often accepted and implemented. Dennison (1993) stated, “successful

innovations have been dependent upon the developmental processes of individuals through their feelings, thoughts, and practices” (p. 20).

The diffusion of innovations according to Rogers (1995) is a process by which innovation spreads. The diffusion process is the development of a new idea from its sources of invention or creation to its ultimate users or adopters. Rogers (1962) summarized the adoption theory as the mental process through which an individual passes from first learning about an innovation to final adoption. He indicated five stages of the adoption process of the diffusion of an innovation model: awareness, interest, evaluation, trial, and adoption. Rogers and Shoemaker (1971) found evidence from diffusion research pertaining to user characteristics that affect the willingness to adopt new ideas. Their findings indicated that empathy, dogmatism, and intelligence are major factors in adoption. This supports the position that the utilization of new ideas, from development to use, is a process experienced by individuals, occurring over time.

An innovation has little merit to the adopters if the advantage of replacing the idea is not clear. It is the adopter’s perception of the relative advantage of the innovation that matters (Rogers, 1962). He also implied that not only adoption but also implementation of an innovation is the most important fact in the change process.

In order for an innovation to be implemented in the classroom, change has to be understood by educators. This understanding has been the avenue of how the innovation improved the current classroom practices. To facilitate an innovation, the focus should be on the individuals, the innovation itself, and the setting in which the innovation is to occur. Change facilitators have been dependent on how people accept, adapt, and implement the innovation (Dennison, 1993).

In The Meaning of Educational Change, Fullan (1982) pointed out that real change represents a serious personal and collective experience. Whether imposed or voluntarily pursued, ambivalence and uncertainty characterize change. If the change is successful, results produce a sense of mastery, accomplishment, and professional growth.

Change occurs as a process according to Emrick and Peterson (cited in Hall & George, 1979). There are two parallel dimensions occurring: a systemic dimension

involving the change in the user environment, and a personal dimension, identifying the change process occurring within individuals. These theories emphasize the personal dimension of the change process and the importance of practitioner reactions to successful innovation adoption. The next section provides a detailed description of the Concerns-Based Adoption Model.

Concerns-Based Adoption Model

Observing, opining, and theorizing about change is common in the literature. What are not so common are the models, which have been articulated out of research on change. One such model is the Concerns-Based Adoption Model (CBAM) developed in the early 1970's. Hall and Rutherford investigated change in educational organizations and devised a model, which described the various levels of concern that individuals go through as they metabolize organizational change (Hall & Rutherford, 1975). Further work done by Hall in collaboration with other noted researchers provided a valuable description of the change process (Hord et al, 1987). The CBAM model provides a focus on the user. Information about the CBAM reminds us that individuals accomplish change.

A dimension of this model is the Stages of Concern About Innovation (Hall, George, & Rutherford, 1986). The individuals first concerns are how an innovation will affect them on a personal level, while later the concerns shift to the task-related level (Hall & Loucks, 1978). This model outlines the developmental process that individuals experience as they implement a new innovation. There are seven basic assumptions which provide guidelines for structuring the change facilitators' activities: Stage 0- Awareness; Stage 1- Informational; Stage 2- Personal; Stage 3- Management; Stage 4- Consequence; Stage 5- Collaboration; Stage 6- Refocusing. A detailed definition for each stage is provided in Table 1. The concept of concerns relates to the feelings, perceptions, motivations, and attitudes of individuals, as they become aware of an innovation (Rutherford, Hall, & Hulling, 1983).

Table 1 Stages of Concern Definitions

Table 1	
<u>Stages of Concern About the Innovation</u>	
0 Awareness	Little concern about or involvement with the innovation is indicated.
1 Informational	A general awareness of the innovation and interest in learning more detail about it is indicated. The person seems to be unworried about herself/himself in relation to the innovation in a selfless manner such as general characteristics, effects, and requirements for use.
2 Personal	Individual is uncertain about the demands of innovation, her/his inadequacy to meet those demands, and her/his role in relation to the reward structure of the organization, decision making, and consideration of potential conflicts with existing structures of personal commitment. Financial status implications of the program for self and colleagues may also be reflected.
3 Management	Attention is focused on the processes and tasks of using the innovation and the best use of information and resources. Issues related to efficiency, organizing, managing, scheduling, and time demands are utmost.
4 Consequence	Attention focuses on impact of the innovation on students in her/his immediate sphere on influence. The focus is on relevance of the innovation for students, evaluation of the outcomes, including performance and competencies, and changes needed to increase student outcomes.
5 Collaboration	The focus is on coordination and cooperation with others regarding use of the innovation.
6 Refocusing	The focus is on exploration of more universal benefits from the innovation, including the possibility of major changes or replacement with a more powerful alternative. Individual has definite ideas about alternatives to the proposed or existing form of the innovation.

Note. Measuring the Stages of Concern About the Innovation: A Manual For Use of SOC Questionnaire, (p.7) by G.E. Hall, A. A. George, and W. L. Rutherford, 1986, Austin, TX: Southwest Educational Development Laboratory.

According to Hord, Rutherford, Huling-Austin and Hall (1987), the CBAM was used to develop the following assumptions about change:

1. Change is a process, not an event. Change is a process occurring over time, and recognizing this is an essential prerequisite of successful change implementation.
2. Change is accomplished by individuals. Change affects people, and their role in the process is important. Therefore, individuals must be the focus of attention in implementing a new program.
3. Change is a highly personal experience. Each individual reacts differently to change and some will assimilate a new practice more rapidly than others will. Change is more successful when its support is geared to the diagnosed needs of the individual users. If change is highly personal, then different responses and interventions are required. By paying attention to each individual's progress one can enhance the implementation process.
4. Change involves developmental growth. Studies indicate that the individuals involved appear to express or demonstrate growth in terms of their feelings and skills. These tend to shift with respect of new program or practice as individuals pass through a greater degree of experience.
5. Change is best understood in operational terms. Teachers, and others, will naturally relate to change or improvement in terms of what it means to them or how it affects their current classroom practice. Change facilitators can reduce resistance to improvement efforts by addressing questions and communicating with teachers and others involved.
6. The focus of facilitation should be on individuals, innovations, and the context. It is easy to forget that books, materials, equipment, or new programs alone do not make change; only people can make change by altering their behavior. The real meaning of change lies in its human, not its material component. (pp. 5-6)

Development of the Stages of Concern Questionnaire

In Hall's SOC model there are seven Stages of Concern and individuals experiencing change must pass through these seven stages. In explaining the seven stages, Hall (1979) stated:

An individual's concerns can move in a developmental progression from those typical of non-users of an innovation to those associated with fairly sophisticated use. For a non-user of an innovation, concerns are about "what the innovation is" and "what it means for me" are relatively intense, and concerns about the impact of the innovation upon students are relatively intense, and concerns about the impact of the innovation upon students is relatively low. As implementation of the innovation takes place, management concerns begin to increase.

Informational and personal concerns begin to decline (p. 205).

Hord et al. (1987) stated that it is normal and natural for individuals to have these concerns. It is equally important to understand that teachers and administrators will move through these stages at different rates. Hord et al. (1987) further reported:

Movement through the stages of concern cannot be forced, but with appropriate support and assistance, it can be aided. At the same time, a lack of assistance of the wrong kind of support can interfere with development changes in concern (p.43).

The research of the CBAM and the concepts of SOC are built upon a positive assumption about change facilitation. One of the major strengths of the CBAM is that it is virtually impossible to manipulate a person's concerns (Hall, 1979).

Studies Using the Concerns-Based Adoption Model

Using the CBAM, Betances (1999), measured the intensity levels of concerns of secondary English language arts, mathematics, science, fine arts, business education, and physical education teachers towards the implementation of performance based curriculum and instruction. The levels of use and the contributing factors to use or nonuse of the innovation were also analyzed. The population consisted of participants from a group of four secondary (9-12) schools in the Marlborough, Rhode Island Public School District.

The study was both quantitative and qualitative. The data were analyzed using procedures outlined in the SOC Manual. The qualitative data from the focus groups were analyzed through simple descriptive statistics. The results of the CBAM indicated that the secondary teachers had intense concerns about the consequence and collaboration in their efforts to implement the standards-based curriculum. The interviews suggested that one-third of the teachers were actively attempting to implement the standards-based curriculum in their classrooms. The teachers that experienced the most success with the innovation were the elective teachers. However, both teachers who administer SOL Tests and teachers who do not administer SOL Tests encountered a number of hindrances during the implementation (Betances, 1999).

Designed to accommodate any innovation, the CBAM has been used to study a variety of innovations. However, the majority of the studies used to verify the CBAM were in educational settings with innovations of instruction, classroom configuration, and instructional administration. According to Green (1993) the CBAM is an effective instrument to measure the concerns of academic and vocational teachers involved in the implementation of Tech Prep. The population for the study consisted of academic and vocational teachers in the southeast region of the United States who were currently participating in Tech Prep programs at the secondary level and attended one of two conferences surveyed. Samples were collected at Tech Prep conferences in Knoxville, TN and Atlanta, GA during the summer of 1992. Three hundred and four teachers responded to the CBAM questionnaire. Multivariate analysis of variance (MANOVA) was used to analyze the data. The results showed that there were no significant differences for any of the five hypotheses addressed in the study.

A study was designed to gain better understanding of program implementation at the local school level and provide further insight into teachers' receptivity to change (Bradley, 1992). The focus of the study was the events and factors that in teachers' perceptions attributed to change in their behavior during the implementation of an innovation. The population for the study consisted of 15 Caucasian female elementary school teachers. These individuals had from eight to 20 years teaching experience in

schools in northeastern Massachusetts. The results revealed that 94% of the subjects (14) were identified at Level IVA, Routine Use of an Innovation, or beyond. The CBAM instruments used in the study indicated the findings concurred with the teacher change literature, which states that teacher's need from 12 to 18 months of using an innovation to become routine users. The data also indicated basic agreement about what teachers believe greatly influenced their behavior to change and to change their belief about an innovation. These included having the appropriate materials to implement the innovation, assistance from the training consultant in the classroom, and the innovation having a positive effect on student achievement. Frequent peer observation of the innovation being taught in the classroom, interaction with other teachers using the innovation, and in-service training during the first year of the program implementation were also mentioned.

The CBAM was utilized by Rogers (1993) to ascertain if industrial arts teachers in a mid-western community had accepted technology education. The SOC Questionnaire was mailed to 44 technology education teachers and 15 industrial arts teachers. The response rate was 71.2%. The findings indicated that industrial arts teachers did not accept technology education. The respondents' SOC profiles peaked at the informational stage, with a secondary peak at the personal stage. The results also indicated that the peak at the refocusing stage signified that the older, more experienced industrial arts teachers were revising or altering the technology education curriculum before accepting it.

Using the CBAM, Savage (1992) reported on an examination of teacher use of curriculum innovation. This study examined the concerns and use of a group of third grade teachers who had at least three years access to the new curriculum. The Stages of Concern Questionnaire and the Levels of Use Interviews were both used in the study. The SOC Questionnaires were mailed to 321 teachers, with 131 responding, and 30 of these individuals were selected to complete the LOU Interview. The study found some significant differences in teacher concerns that corresponded to teacher involvement in the development of curriculum innovation. There was also a lack of significant

differences in some areas of teachers concerns and teacher use of the guide according to involvement in the development of the curriculum.

The next section discusses the standards-based reform initiatives. More importantly, Virginias' Standards of Learning (SOLs) are discussed as they pertain to this study.

Standards-Based Reform

Historically, American schools have been committed to conducting educational processes and not producing outcomes (Conley, 1993). However, this is changing. According to Markham (1993) the release of the publication of a *Nation at Risk* in 1983 initiated a decade-long push to upgrade the quality of American schools at all levels. Similar reports followed, which prompted what is now known as *Standards-Based Reform*.

There are two significant types of standards used in the standard setting process. Content standards provide the foundation for educational reform (Smith, Furhman, & O'Day, 1994). These standards define the essential knowledge and skills that should be taught and learned in school (Harris & Carr, 1996). While content standards define what each student should know and be able to do, performance standards establish the degree or quality of student performance set forth in the content standards. Performance standards often include various levels of achievement such as "basic," "proficient," and "advanced." Performance assessments provide results in measuring the knowledge and skills outlined by both the content and performance standards (Marzano & Kendall, 1995).

Many educators believe that if America is serious about reforming its' educational system, schools must implement high standards for student achievement that stressed performance (Markham, 1993). Ravitch (1995) asserts that as standards improve the daily life of Americans, so, too, will they improve the effectiveness of American education. Ravitch goes on to add "standards can improve achievement by clearly defining what is to be taught and what kind of performance can be expected" (p. 25). Harris and Carr (1996) suggest that standards express clear expectations for what all students, except

perhaps those with disabling conditions, should know and be able to do. Standards set clear performance goals for students, helping them to understand what they need to do to meet those standards. Standards also address the needs of all of the school's stakeholders. For example, standards set clear performance expectations for students, helping them understand what they need do to meet the standards.

Standards also lead to improved student performance and promote more challenging, equitable, and rewarding experiences for learners. Standards cause teachers to design curriculum, instruction, and assessment around what is important to learn. For school districts and schools, standards provide a focus for developing new ways to organize curriculum content, instructional delivery systems, and assessment plans. For parents, business people, and community leaders, standards communicate shared expectations for learning and provide a common language for talking about the processes of learning and teaching. As a result, these stakeholders take a more active role in monitoring student's education. Finally, for the states subscribing to a statewide standards movement, these standards are a common reference tool for ensuring that the components of the educational system work together. In other words, standards make good learning evident from district to district and from school to school (Harris & Carr, 1996).

Standards-Based Assessment

Marsh and Roundtree (1997) suggest that assessment is the heart of any standard-based system, providing specific information about how well students are doing. Properly prepared standards are designed to be measured (Murphy & Doyle, 1998). In the classroom, many advocates of standards-based reform view assessment as a key tool in guiding instruction to enable students to reach high standards (Harris & Carr, 1996). Standards can help to focus the curriculum on what is important, raise achievement by making classroom expectations clear, and provide a necessary foundation for educational improvement (Hayes, 1992).

According to Darling-Hammond and Falk (1997), assessment tied to standards can provide important information to students, families, and communities about how

students are progressing in their learning and address inadequacies. Urbanski (1993) adds that good standards and good assessment ought to be a mirror of the curriculum and education that children have. Effective assessment not only certifies individual student performance in relation to a set of standards, but also motivates students to meet those standards. However, Waters, Burger, and Burger (1995) state that for this to happen, assessment must be fair, meaningful, and reflect the highest possible expectations for student achievement.

With proper assessment, teachers receive accurate feedback on their instruction and can make a factual decision on what an individual student might need. Meanwhile, students know what is expected of them in relation to the standards, which focus on continuous improvement. Effective assessment not only certifies individual student performance in relation to a set of standards. However, critics of the standards movement caution that it could lead to test-driven instruction (Waters, Burger & Burger, 1995).

Smith, Fuhrman, and O'Day (1994) suggest that ambitious content standards reinforced by assessment and other policies have the potential to improve schooling. For the purpose of student accountability, many standards advocates recommend a combination of standardized tests and performance-based assessment. Some states have translated their content and performance standards into statewide assessment.

In Virginia, a new state mandated testing program has been launched with unprecedented consequences. In 1998, classroom teachers and test coordinators statewide administered 1.6 million tests covering a range of subjects linked to the states new academic standards (Portner, 1999). In the first round of tests, students in grades 3, 5, and 8 took exams in four subject areas: mathematics, English, science, social studies, and history. Elementary and middle school students will not necessarily be held back a grade if they fail the new tests, but the scores must be considered when teachers make a promotion decision. In addition, high school students took end-of-course tests in eight subject areas, but it will be 2004 before Standards of Learning (SOL) test scores will be used to determine graduation status and to evaluate schools (McMillan, 1998). Beginning with the high school graduating class of 2004, students will not receive a high school

diploma until they pass the end-of-course tests that are required for verified credit. In addition to being necessary for graduation, SOL assessment test scores could have other consequences: if student scores at an individual school are not proficient to state adopted standards, that school's accreditation could be in jeopardy. According to McMillan (1998), besides the risk of not being fully accredited or losing accreditation altogether, other consequences that have been rumored across the state include teachers losing continuing contracts and teachers and administrators being transferred or losing their jobs.

Standards-Based Reform Initiatives Require Staff Development

The teachers' knowledge of subject matter is crucial to standards movement. According to Harrington-Lueker (1998), some teachers do not have the in-depth expertise of their subject matter needed to deliver high-quality instruction to all students. Harrington-Lueker (1998) recommends that school systems encourage teachers to enroll in graduate courses to become more proficient in their subject area. Walters, Burger, and Burger (1995) suggest that teachers, in order to prepare for a new standards system, be provided with extensive staff development and in-service programs that include training in cooperative learning and team teaching, total quality practices, conflict resolution, and coaching for high performance.

Professional development is a necessary component of successfully implementing standards-based reforms. Monson and Monson (1997) recommended this professional development include opportunities for dialogue among professional staff members. Harris and Carr (1996) believe that standards-based reforms can be a powerful communication tool among educators within teams, from grade to grade, across schools, and in planning for the individual needs for students. Instructional conversations (Goldenberg & Gallimore, 1991) and peer coaching provide teachers opportunities to reflect on and analyze their own teaching in constructive, non-threatening arenas.

Teachers possess knowledge. "Policymakers need to find ways to support opportunities for collegial disclosure and inquiry, including strategies like peer coaching, team planning and teaching, and situations in which teachers can acquire, create, and test

their own knowledge" (Darling-Hammond, 1992, p. 20). Walters, Burger, and Burger (1995) suggest that if schools successfully align curriculum, instruct, and assess professional development, then they can deliver on the promise to improve the quality of America's educational system.

Standards-Based Reform Requires Change

The amount and scope of educational change necessary to implement academic standards represents a significant threat to educators and therefore to the success of the standards movement (Cross & Joftus, 1997). Fullan (1991) and Elmore (1996) provide strong analyses of the difficulties with, and perverse results of, large-scale educational change. Elmore (1996) warns that standards-driven reform requires many fundamental changes in the way educators work.

Educators involved in standards-based reform agree that for standards to have value and meaning, they must be related to curriculum and instruction, professional development, and assessment (Harris & Carr, 1996). According to Mitchell (1996), the shift to a standards-based system will mean rethinking everything including: curriculum, assessment, scheduling, both the day and the year, the distribution of resources, financial and technological, the roles of adults in the school system, professional development for all personnel, and ultimately the definition of school itself.

According to Markham (1993), changing America's schools to reflect higher standards will not happen overnight. Cross and Joftus (1997) believe that educators typically resist change without the appropriate incentives, training, and resources. Despite the threats posed by the need for significant changes in the way educators work academic standards and related reforms represent a tremendous opportunity to create rich learning environments and raise student achievement. To make the opportunity a reality, educators must play an active role in ensuring that standards take center stage in all their school practices. To do this effectively reformers must possess a clear understanding of the attitudes and concerns of the practitioners during the implementation of the Standards-Based Reform initiative.

This study will use the CBAM to investigate the Stages of Concern educators in Superintendents' Region Seven possess during the implementation of Virginia's Standards of Learning. The data collected from the research will be used to aid the Best Practice Center in their efforts to prepare educators in their region to successfully implement Virginia's Standards of Learning.

Chapter Summary

One can ascertain from this review of the literature that a wide range of complex conditions may significantly impact the success of the educational reform process. The complex view of change by its very nature presents challenges for how one can gain knowledge from school practitioners about the conditions they believe facilitate, or make easier, the educational reform process.

Seeking the perspectives of educational personnel actually engaged in change could add significantly to the understanding of the process and could assist educational practitioners in "putting theory into practice." It becomes incumbent, then, upon educational researchers to derive a systematic method for collecting data that can be used to inform educational communities, which are considering embarking upon reform initiatives, or which are currently implementing change.

Survey research has a long historical tradition as a method of systematic data collection (Borg & Gall, 1989). Collecting standardized information from all subjects in a sample, the questionnaire is one of the most common instruments for data collection in survey research. Although survey instruments are not error free (Fowler, Jr., 1993), when proper sampling procedures are employed, survey results can be generalized to the population from which the sample was drawn (Borg & Gall, 1989).

A well-developed, comprehensive questionnaire, therefore, appears to be an appropriate instrument to determine consensus among educational personnel engaged in change about the conditions that facilitate the educational reform process.

A review of the literature reveals there is negligible research, if any, that addresses the change process from the comprehensive view established in the literature. It is entirely logical and possible that hundreds, possibly thousands, of schools across the

nation will engage in educational reform according to guidelines presented in the literature, only to find that their efforts are for naught due to the lack of knowledge of the conditions that facilitate change at the local level.

Substantive reform in a complex school district requires a level of intellectual sophistication and unity of purpose that is seldom attainable under the prevailing model of school governance. In conclusion, insightful school leaders must recognize the importance of good theory. Therefore, understanding the change process, and how leadership and organizational structures function will help educators see the light of these interrelations and create characteristics of a school system that would be more amenable to reform.

For school leaders to make significant change, superintendents, principals, and teachers must buy into and understand good theory and direct its practice. Senge's work portrays an organizational leader involved in systemic change as a highly moral individual able to reflect his vision through and with others. This type of leader has a secure position that will inspire trust and respect of staff and build a culture of teamwork.

By virtue of position, a school superintendent must be able to exercise specialized leadership as the instructional leader of the district; a superintendent must also exercise and direct (more) generalized leadership with the school board and the community. Howard Gardner sees the ability to do both effectively as an uncommon gift; that is critical in leading a significant reform effort in a school district.

Aside from leadership, significant organizational characteristics of schools also impede reform efforts. Policy makers, politicians and educational researchers often pass a strong vision of reform but are blind to the interconnected variables that make up organizational reality. Educators, on the other hand, become more focused on the challenges of dealing with the reality of reform that they become weary, creating frustration within the process.

Organizational structures involve the external environment as well as the internal organization. The external environment includes the community's powerful influences on education policy and practices; the stakeholders in the educational process students,

parents and the general public work collaboratively. Indeed, staff members play dual roles as employees and parents or community members. With internal organizations such concepts as site-based management may be in place or process.

For educational reform to be successful it must extend well beyond the requirements for internal team building and shared vision of private organizations. Unfortunately neither outstanding leadership nor fortunate organizational circumstances are the norm for America's schools.

The conclusion about the practice of the change process indicated that substantive change is both a time consuming and an energy-intensive process. The time frame from initiation to institutionalization is lengthy. Major reform efforts can take even longer. Other impediments to change in the education process are short tenure of board members and superintendents, and the influence of politics work against sustaining school reform. The time early in the implementation process, during which productivity and morale both decline due to tension and anxieties generated by the stakeholders during the reform process, is often a barrier. Accountability and political demands along with expectations may cause reform efforts to resolve during this period.

Unfortunately, many reformers are unaware of the impact the school culture has on the process of change. The history of education is mangled with examples of interventions that have failed or had adverse affects because those involved had a distorted conception of the school culture they sought to change. Education is change. Meaningful educational reform implies a significant change in the interactions of teachers and students. Significant changes are also required in curriculum, instruction and standards of achievement.

A systemic approach offers the best hope to implement school reform. Researchers need to know why reforms are successful in some school districts but not in others. Reformers must agree that successful reform can not occur until the prevailing realities of school governance, along with leadership roles, the change process and the nature of school system operations are substantially altered. Convincing Americans to

alter their cherished traditions for governing and organizing their school might require the turn of the century.

Change will encounter resistance, and in order for reforms to be successfully implemented, attention must be given to the practitioners who are implementing the innovation. Research studies on innovation adoption theory can be helpful to facilitators involved in implementing innovations.

The Stages of Concern About the Innovation model can provide diagnostic information to determine the concerns of practitioners. By understanding these Stages of Concern, and determining where the practitioner's concerns are in relation to the SOC, the change facilitator can devise intervention strategies in order to enhance successful implementation.

CHAPTER THREE

METHODOLOGY

The purpose of this chapter is to describe the methodology of the study. The research design, participants, instrumentation, data collection procedures and data analyses are discussed in this chapter.

Research Design

Central office instructional staff, building level principals, and teachers of Superintendents' Region Seven in Virginia were asked to complete a questionnaire in order to provide information on the Stages of Concern that occur during the implementation of the Standards of Learning. This type of research is called descriptive. Descriptive research involves data collection in order to answer questions concerning the status of the sample being investigated. This type of study systematically describes the facts and characteristics of a given population or area of interest with a certain degree of accuracy (Isaac & Michael, 1990).

Participants

Virginia is an extremely diverse state, with very distinct geographical, cultural, and economical differences. Consequently, based upon these differences and the political and historical climates of these geographical regions, each location will be inclined to develop its own process for implementing change. These characteristics will greatly effect the factors that influence educators during the implementation process of any statewide innovation. Therefore, this study, on the Stages of Concern, is limited to a single region in Virginia, the Superintendents' Region Seven.

Superintendent's Region Seven consists of 19 school divisions located in rural Southwest Virginia. These school divisions employ approximately 9500 instructional personnel, 200 central office instructional administrators, 350 building level principals, and 8950 teachers.

Public schools in this region are currently involved in implementing The Standards of Learning for Virginia Public Schools (SOL). This large-scale educational

reform initiative will require many fundamental changes in the way central office instructional administrators, building level principals, and teachers view educational reforms. The amount of educational change necessary to implement academic standards will promote a challenge for public educators in this region, thus making them an excellent population for a study using the Stages of Concern Model.

A letter was sent to each of the 19 school superintendents of Region Seven in Virginia soliciting the personnel rosters from each division. Of the 19 sites, 10 expressed willingness to participate in the study, which represents 52.6% of the total population. In order to seek approval for using a survey, the Application for Approval of Research Involving Human Subjects was completed by the researcher and approved by the Institutional Research Review Board.

Since a one-way analysis of variance (ANOVA) was employed, it was expected that each cell would contain at least 25 participants (S. Hutchinson, personal communication, November 3, 1999). Therefore, 405 individuals including: 45 central office instructional administrators, 60 elementary building level principals, 60 secondary building level principals, 60 elementary teachers who do not administer SOL Tests, 60 elementary teachers who administer SOL Tests, 60 secondary teachers who do not administer SOL Tests, and 60 secondary teachers who administer SOL Tests were asked to participate in the study.

Return rates for survey research varies (Babbie, 1983). A return rate of 50% is considered to be an adequate amount of participants for survey research. For this study, a return rate of 50% was met. Of the participants selected 31 central office instructional administrators, 31 elementary building level principals, 32 secondary building level principals, 33 elementary teachers who do not administer SOL Tests, 30 elementary teachers who administer SOL Tests, 33 secondary teachers who administer SOL Tests, and 41 secondary teachers who administer SOL Tests responded. This represents a 57.04% return rate. Regarding the 231 questionnaires returned all were usable, and therefore used in data analysis.

Instrumentation

The concept of the Stages of Concern SOC is the key dimension of the Concern-Based Adoption Model (CBAM). According to Hall (1979), the SOC describes the feelings, perceptions, and attitudes of individuals as they consider the approach and implementation of an innovation. The innovation in this study is the identification of the stages of concern among central office instructional administrators, building level principals, and teachers with respect to the Standards of Learning being implemented in Superintendents' Region Seven in Virginia.

The SOC evolved from Hall's research, which hypothesized that individuals entertain seven stages of concern as they accept the innovation: Awareness, Informational, Personal, Management, Consequence, Collaboration, and Refocusing. The respondents indicated the degree to which each concern was reflective of their beliefs by marking a number next to each statement on a 0 to 7 Likert-scale. High numbers indicated high concern, low numbers constituted low concern, and 0 was indicative of very low concern or completely irrelevant items (Hall, George, & Rutherford, 1986).

The 35-item questionnaire represents the seven stages of concern. Each scale consists of items that are representative of concerns that are prominent at a specific Stage of Concern, according to the concerns theory. Five statements represent each of the seven Stages of Concern. The sum of the responses to the five statements on a specific scale is the raw score for that particular scale (Hall et al., 1986) (see Appendix A).

A section of the instrumentation examines the demographic data of the respondents. The demographic information includes the grade level and the current professional position of the respondent. The questions were answered using a forced choice response.

Reliability and Validity of SOC

The items representing each stage of the SOC Questionnaire were selected in order to maximize internal consistency (George, 1977). As a result of this study, high internal reliability was assured (George, 1977). Research conducted with professors and teachers (n = 830) expressing concerns about the innovations of team teaching and

instructional modules used the 35 item SOC Questionnaire, and a generalization of the Kuder-Richardson Formula 20 for dichotomous items was then computed. A sub-sample (n=171) of teachers completed the SOC Questionnaire a second time, and test-retest correlation were computed. The internal consistency (alpha coefficients) had an estimated range from .64 to .83 with six of the seven coefficients being above .70.

According to George (1977), a series of validity studies were conducted by Cronbach and Meehl (1955) to demonstrate that scores on the Questionnaire relate to each other and to other variables. The test studies, validated by a panel, convincingly demonstrated the validity of the stages of Concern Questionnaire over the two-year longitudinal study (Hall, George & Rutherford, 1986).

Data Collection Procedure

Initial preparation for the study included obtaining permission to reproduce the SOC Questionnaire from the Director of Office Communications of the Southwest Educational Development Laboratory in Austin, Texas (see Appendix B).

The participants were sent a survey packet that contained a cover letter, copy of the survey, demographic data sheet and a stamped, self-addressed envelope. The cover letter explained the purpose and importance of the study. In addition, the letter provided assurance to the respondents of the confidentiality of their responses and voluntary nature of participation (see Appendix C). Letters soliciting assistance from the building level principal and the division superintendent were also sent (Appendix D), and (Appendix E).

The researcher established a logbook for the study. This book contained the code assigned to each participant, the participants' name and address, and the date materials were sent. The logbook also included the date the completed Questionnaire was returned and the data regarding follow up reminders. The logbook was destroyed to maintain trust and confidentiality of participants.

Data Analysis

For this study the sum of the responses to the five items in each scale was calculated and converted to percentiles, or what the authors term "Peak Stage Score Interpretation". Stages of concern profiles were plotted from the generated scores. Each

profile reflects the relative intensity of each Stage of Concerns and presents a general description of the concerns of the group (Hall & Rutherford, 1975).

These data were entered into a database for the Statistical Package of Social Sciences Windows (SPSS-W), version 8.0. The data from the corresponding demographic page were also entered into the same database. The data were sorted to determine the frequencies at each stage level for the total number of surveys and each of the corresponding research questions. The data were then averaged to develop mean stage scores for each demographic group. Using the Peak Scoring method these means were used to determine the group profiles.

Further analysis was conducted by subjecting the data to analysis of variance (ANOVA) procedures. The procedures were used to compare the relationships between both teachers who administer SOL Tests and teachers who do not administer SOL Tests and the seven Stages of Concern and position/grade level taught and the seven Stages of Concern, respectively. Because there were different numbers of individuals in the various groups a series of Scheffe's post hoc test were employed to compute the limits of the confidence intervals for each difference between the means (Howell, 1997).

Chapter Summary

This chapter describes the research design and outlines the format for data analysis. The survey instrument is based on the Concern Based Adoption Model using the Stages of Concern Questionnaire. The data were collected by administering a survey to a random sample of central office instructional administrators, building level principals and teachers in Virginias' Superintendents Region Seven. The survey questioned the concerns these individuals have concerning the implementation of Virginias' Standards of Learning. Group profiles were determined, examined for differences, and a cross-tabulation of occupational position and grade level taught to highest stages of concern for each group were assessed. The final data analysis and discussion is detailed in Chapter IV.

CHAPTER FOUR

DATA ANALYSIS

The purpose of this chapter is to describe the results of the study. This chapter also includes; (1) a description of the respondents; (2) analysis of research objective one; (3) analysis of research objective two; (4) analysis of research objective three; and (5) a chapter summary.

Description of the Respondents

The educators in this region are in the third year of implementing The Standards of Learning in Virginia's public schools. This large-scale educational reform initiative is part of the standards movement that America has been implementing since the publication of a *Nation at Risk*. Virginia, however, has added end of course test to evaluate student outcomes and to provide feedback for teachers to assess their teaching performance.

A letter was sent to each of the 19 school superintendents of Region Seven in Virginia soliciting the personnel rosters from each division. Ten school divisions responded. The researcher then randomly selected schools based on their size and location in an attempt to have a sample indicative of the region. From this population, 405 individuals were randomly selected to participate in the study. These individuals were selected based on their occupational position, which determined whether or not they were responsible for administering SOL Tests. The participants were: central office instructional administrators, elementary and secondary building level principals and elementary and secondary teachers in Superintendents' Region Seven in Virginia involved in implementing the Standards of Learning. The seven occupational positions were divided into two groups, teachers who administer SOL Tests and teachers who do not administer SOL Tests. The teachers who administer SOL Tests were elementary teachers who taught grades 3, and 5, and the secondary teachers who taught math, history and science. The teachers who do not administer SOL Tests were the central office instructional administrators, elementary and secondary principals, elementary teachers

who taught grades 1, 2, and 4, and secondary teachers who taught choral arts, foreign languages, and business education.

Of the 405 questionnaires forwarded to the school divisions and distributed to the participants 231 were returned and all were usable for a response rate of 57.04% return rate. Table 2 indicates the number of questionnaires returned by each group.

Treatment of Data

The 35 statements on the SOC Questionnaire express a certain level of concern about the Standards of Learning SOLs. The respondents indicated the degree to which each concern is true to them by marking the number next to each statement on a 0 to 7 scale: the higher the number, the higher the concern. The 35 statements were selected to represent the seven fundamental areas of concern. Each stage is related to five statements. The “raw score” is the sum of the responses to the five statements. For this study, the raw scores were converted to percentiles to determine the highest stage score or what is known as the “Peak Stage Score.” The “group mean” score is the average raw score for each group per stage. These scores were compared to the demographic factors using an ANOVA to determine if any significant differences exist between the groups at the seven stages of concern.

Table 2 Questionnaire Response Breakdown

	Mailed	Returned
Central Office Instructional Administrators	45	31
Elementary Principals	60	31
Secondary Principals	60	32
Elementary Teachers (SOL Test Given)	60	30
Elementary Teachers (SOL Test Not Given)	60	33
Secondary Teachers (SOL Test Given)	60	41
Secondary Teacher (SOL Test Not Given)	60	33
Total	405	231
Questionnaires—Non-Usable		0
Total Returned		231
Response Rate		57.04%

Research Objective One

Research objective one was to determine the Stages of Concern profiles of central office instructional administrators; elementary, and secondary building level principals; elementary and secondary teachers who administer SOL Tests and elementary and secondary teachers who do not administer SOL Tests in Superintendents' Region Seven involved in the implementation of Virginia's Standards of Learning (SOL).

To determine these profiles, the scoring instrument provided in the SOC Manual was used to compute the range of scores and mean scores for each Stage of Concern, by group. Five statements represent each of the seven Stages of Concern. The raw score for each stage is the sum of the responses to the five statements for that stage. Table 3 presents the statements according to each stage and Table 1 indicates the stage definition. Once the seven raw scores were tabulated for each group, the scores were converted to percentiles, which are called stage scores. The stage scores are directly related to the stage definitions with the relative intensity of concern being indicated by the percentile score. The higher the score the more intense the concern at the stage. The lower the score, the less the intensity at that stage.

In order to develop a detailed interpretation of the profiles, the Peak Score scoring method was used to examine the data. The following is a discussion of the group stage scores, as referred to in Table 4, on the seven Stages of Concern.

Table 3 Statements on the Stages of Concern

STAGE 0 – AWARENESS

- 3 I don't even know what the innovation is.
- 12 I am not concerned about the innovation.
- 21 I am completely occupied with other things.
- 23 Although I don't know about this innovation, I am concerned about things in this area.
- 30 At this time, I am not interested in learning about this innovation.

STAGE 1 – INFORMATIONAL

- 6 I have a very limited knowledge about the innovation.
- 14 I would like to discuss the possibility of using the innovation.
- 15 I would like to know what resources are available if we decide to adopt this innovation.
- 26 I would like to know what the use of the innovation will require in the immediate future.
- 35 I would like to know how this innovation is better than what we have now.

STAGE 2 – PERSONAL

- 7 I would like to know the effect of reorganization on my professional status.
- 13 I would like to know who will make the decisions in the new system.
- 16 I would like to know how my teaching or administration is supposed to change.
- 28 I would like to have more information on time and energy commitments required by this innovation.
- 33 I would like to know how my role will change when I am using the innovation.

(table continues)

STAGE 3 – MANAGEMENT

- 4 I am concerned about not having enough time to organize myself each day.
- 8 I am concerned about conflict between my interests and my responsibilities.
- 16 I am concerned about my inability to manage all the innovation requires.
- 25 I am concerned about time spent working with non-academic problems related to this innovation.
- 34 Coordination of tasks and people is taking too much of my time.

STAGE 4 – CONSEQUENCE

- 1 I am concerned about students' attitudes toward this innovation.
- 11 I am concerned about how the innovation affects students.
- 19 I am concerned about evaluating my impact on students.
- 24 I would like to excite my students about their part in this approach.
- 31 I would like to use feedback from students to change the program.

STAGE 5- COLLABORATION

- 5 I would like to help other faculty in their use of the innovation.
- 10 I would like to develop working relationships with both our faculty and outside faculty using this innovation.
- 18 I would like to familiarize other departments or persons with the progress of this new approach.
- 27 I would like to coordinate my effort with others to maximize the innovation's effects.
- 29 I would like to know what other faculty are doing in this area.

STAGE 6- REFOCUSING

- 2 I now know of some other approaches that might work better.
- 9 I am concerned about revising my use of the innovation.
- 20 I would like to revise the innovation's instructional approach.
- 22 I would like to modify our use of the innovation based on experiences of our students.
- 31 I would like to determine how to supplement, enhance, or replace the innovation.

Note. Measuring the Stages of Concern About the Innovation: A Manual For Use of SOC Questionnaire, (p. 7) by G.E. Hall, A.A. George, and W.L. Rutherford, 1986, Austin, TX: Southwest Educational Development Laboratory.

Profiles by Position

Central Office Administrators' highest percentile score was 81% for the Awareness Stage, as referred to in Table 4. A high peak score on Stage 0 for teachers who do not administer SOL Tests reflects awareness of and concern about the innovation. The second highest percentile (69%) for central office administrators occurred at the Personal, Management and Refocusing Stages. This indicates that the group is relatively concerned with status, reward, and potential or real effects of the innovation (Standards of Learning). The individuals are also concerned about the management of the innovation and have some ideas about how to change their use. The next highest percentiles were (59%) Collaboration Stage and (54%) Consequence Stage.

Elementary Administrators highest percentile score was 78% for the Personal Stage. A high score in Stage 2 indicates concern about status, reward, and potential or real effects of the innovation. The second highest score was (66%) for the Awareness Stage followed by the Management Stage (65%), Refocusing Stage (65%). The Informational Stage (63%), Collaboration Stage (59%), and Consequence Stage (48%) complete the remaining scores.

Secondary Administrators' highest percentile score was 81% for the Awareness Stage. A high peak score on Stage 0 for teachers who do not administer SOL Tests reflects awareness of and concern about the innovation. The second highest percentile (78%) for secondary administrators occurred at the Personal. This indicates that the group is relatively concerned with status, reward, and potential or real effects of the innovation (Standards of Learning). The remaining scores are as follows: Informational Stage (63%), Management Stage (60%), Refocusing Stage (57%), Collaboration Stage (55%), and Consequence Stage (54%).

Elementary teachers who administer SOL Tests highest percentile score was (69%) for the Management Stage. This indicates that these individuals are concerned about the management, time, and logistical aspects of the innovation. The second highest stage was Refocusing (65%) which suggest that the individuals have ideas about how to improve use of the innovation. The Personal Stage (63%), Informational Stage (57%),

Consequence Stage (54%), Awareness Stage (53%), and Collaboration Stage (44%) completed the remaining scores for the group.

Elementary teachers who do not administer SOL Tests highest percentile score was (77%) for the Awareness Stage. The second highest was (35%) for the Personal Stage. The areas of concern for the Personal Stage focus on the individual's role and ability in meeting the demands of the Standards of Learning. The remaining SOC for this group were the Informational Stage (34%), Management Stage (27%), Refocusing Stage (27%), Collaboration Stage (14%), and Consequence Stage (7%).

Secondary teachers who are responsible for Standards of Learning Tests highest stage of concern for was (77%) for the Management Stage (77%), followed by Refocusing Stage (65%), Personal Stage (63%), Consequence Stage (63%), Awareness Stage (60%), Informational Stage (60%), and Collaboration Stage (40%).

Secondary Teachers who are not responsible for administering Standards of Learning Test scored the Personal Stage (87%) as their highest stage of concern. This indicates an intense personal concern about the innovation and its consequences on them. The Informational Stage (75%) was the second highest stage. The area of concern for the Informational Stage is the desire for more information about the innovation. The remaining stages of concerns for this group were Awareness Stage (66%), Management Stage (60%), Refocusing Stage (52%), consequence Stage (43%), and Collaboration Stage (40%).

Table 4 Summary Profile of Stages of Concern

	N	Percentile
Awareness		
Central Office Administrators	31	81%
Elementary Principals	31	66%
Secondary Principals	32	81%
Elementary Teachers (SOL Tests Given)	30	53%
Elementary Teachers (SOL Tests Not Given)	33	77%
Secondary Teachers (SOL Tests Given)	41	60%
Secondary Teachers (SOL Tests Not Given)	33	66%
Informational		
Central Office Administrators	31	66%
Elementary Principals	31	63%
Secondary Principals	32	63%
Elementary Teachers (SOL Tests Given)	30	57%
Elementary Teachers (SOL Tests Not Given)	33	34%
Secondary Teachers (SOL Tests Given)	41	60%
Secondary Teachers (SOL Tests Not Given)	33	75%
Personal		
Central Office Administrators	31	67%
Elementary Principals	31	78%
Secondary Principals	32	78%
Elementary Teachers (SOL Tests Given)	30	63%
Elementary Teachers (SOL Tests Not Given)	33	35%
Secondary Teachers (SOL Tests Given)	41	63%
Secondary Teachers (SOL Tests Not Given)	33	87%
Management		
Central Office Administrators	31	69%
Elementary Principals	31	65%
Secondary Principals	32	60%
Elementary Teachers (SOL Tests Given)	30	69%
Elementary Teachers (SOL Tests Not Given)	33	27%
Secondary Teachers (SOL Tests Given)	41	77%
Secondary Teachers (SOL Tests Not Given)	33	60%

(table continues)

Consequence

Central Office Administrators	31	54%
Elementary Principals	31	48%
Secondary Principals	32	54%
Elementary Teachers (SOL Tests Given)	30	54%
Elementary Teachers (SOL Tests Not Given)	33	7%
Secondary Teachers (SOL Tests Given)	41	63%
Secondary Teachers (SOL Tests Not Given)	33	43%

Collaboration

Central Office Administrators	31	59%
Elementary Principals	31	59%
Secondary Principals	32	55%
Elementary Teachers (SOL Tests Given)	30	44%
Elementary Teachers (SOL Tests Not Given)	33	14%
Secondary Teachers (SOL Tests Given)	41	40%
Secondary Teachers (SOL Tests Not Given)	33	40%

Refocusing

Central Office Administrators	31	69%
Elementary Principals	31	65%
Secondary Principals	32	57%
Elementary Teachers (SOL Tests Given)	30	65%
Elementary Teachers (SOL Tests Not Given)	33	27%
Secondary Teachers (SOL Tests Given)	41	65%
Secondary Teachers (SOL Tests Not Given)	33	52%

Research Objective Two

To determine if there were significant differences between the independent variable position Teachers who administer SOL Tests and teachers who do not administer SOL Tests with seven levels (Central Office Instructional Administrators, Elementary Principals, Secondary Principals, Elementary Teachers who administer SOL Tests, Elementary Teachers who do not administer SOL Tests, Secondary Teacher who administer SOL Tests, Secondary Teachers who do not administer SOL Tests and the seven dependent variables of: Awareness, Informational, Personal, Management, Consequence, Collaboration, and Refocusing.

A one-way analysis of variance was run between the seven scale means for each stage of concern to determine if there were differences in intensity levels held by central office instructional administrators, elementary principals, secondary principals, elementary teachers who give the SOL Tests, elementary teachers who do not give the SOL Tests, secondary teachers who give the SOL Tests, and secondary teachers who do not give the SOL Tests. If a significant F ratio resulted at the .05 level of probability, then a Scheffe post hoc analysis was run to determine which pair(s) of means differed. Results of these procedures for the seven stages of concern follow.

Awareness Stage

Five item statements, each with choices ranging from 7 (very true of me now) to 0 (irrelevant), were used to measure the intensity level on this stage of concern for the seven groups of school personnel. Table 5 shows the one-way analysis of variance that was conducted to determine if there were differences among the respondents on the dependent variable, Awareness Stage. Mean scores for the seven groups of school personnel were approximately equal with a low of 4.47 for elementary teachers with SOL Tests and a high of 9.90 for central office instructional administrators. The mean scores of secondary principals, secondary teachers without SOL Tests, elementary teachers without SOL Tests, elementary principals, and secondary teachers with SOL Tests were, 9.72, 9.15, 7.79, 7.10, 5.83, and respectively. The calculated F ratio of 5.67 showed a significant difference at the .05 level, thus indicating a significant difference in at least

two of the means for the seven groups. The Scheffe post hoc analysis revealed that the mean score of 4.47 for elementary teachers with SOL Tests was significantly lower than the mean scores of 9.90 for central office instructional administrators, 9.72 for secondary principals, and 9.15 for secondary teachers without SOL Tests on the variable “Awareness Stage.” This indicates that the central office instructional administrators, secondary principals, and secondary teachers without SOL Tests held higher intensity levels toward the Awareness Stage. No significant differences were observed between the other groups.

Table 5 Analysis of Variance- Awareness Stage as Related to Users and Nonusers

	Central Office Administrators	Elementary Principals	Secondary Principals	Elementary Teachers (SOL)	Elementary Teachers (No SOL)	Secondary Teachers (SOL)	Secondary Teachers (No SOL)
N	31	31	32	30	33	41	33
Mean	9.90 *	7.10 *	9.72	4.47 *	7.79	5.83	9.15 *
SD	8.57	4.28	5.08	1.98	4.31	2.74	5.09
Source		df	ss	ms	F Ratio	p	
Between Groups		6	818.75	136.46	5.67	.000	
Within Groups		224	5392.92	24.08			
Total		230	6211.66				

* p. < .05.

Informational Stage

Participants were requested to respond to five item statements on this scale. Choices ranged from 7 for very true of me to 0 irrelevant, thus making it possible to receive a high score of 35 or a low score of 0. Findings for this dependent variable are recorded in Table 6.

The data indicated that the central office instructional administrators held the highest intensity level on the variable "Informational Stage" with a mean score of 18.39. Secondary teachers without SOL Tests were slightly less than that of central office instructional administrators. The remainder of the groups followed in this order: secondary principals, elementary principals, secondary teachers with SOL Tests, elementary teachers with SOL Tests, and elementary teachers without SOL Tests. The calculated F ratio of 3.04 was significant at the .05 level of significant indicating a significant difference between at least two of the means for the seven groups. The Scheffe post hoc analysis revealed that the mean score of 11.03 for elementary teachers without SOL Tests was significantly lower than the mean score of 18.39 for central office instructional administrators on the variable "Informational Stage." This indicated that central office instructional administrators in general were more concerned about assessing information about the Standards of Learning than were elementary teachers without SOL Tests. No significant differences were observed between the other groups.

Table 6 Analysis of Variance- Informational Stage as Related to Users and Nonusers

	Central Office Administrators	Elementary Principals	Secondary Principals	Elementary Teachers (SOL)	Elementary Teachers (No SOL)	Secondary Teachers (SOL)	Secondary Teachers (No SOL)
N	31	31	32	30	33	41	33
Mean	18.39 *	16.35	16.59	14.33	11.03 *	16.22	17.79
SD	9.88	7.92	6.80	9.92	8.00	7.11	6.76
Source		df	ss	ms	F Ratio	p	
Between Groups		6	1190.02	198.34	3.04	.007	
Within Groups		224	14626.35	65.30			
Total		230	15816.36				
* $p < .05$.							

Personal Stage

School personnel responded with “very true of me now,” “somewhat true of me,” “not true of me,” or “irrelevant” as to their feelings toward the implementation of the SOLs. With five items on the scale and a scoring range from 0-7 possibility for each item, it was possible to receive a high score of 35 or a low score of 0. Group means, standard deviations, and the analysis of variance F ratio are reflected in Table 7.

Secondary teachers with SOL Tests had a mean score of 21.37, elementary principals had a mean score of 21.32, secondary teachers without SOL Tests had a mean score of 21.21, central office instructional administrators had a mean score of 19.58, secondary principals had a mean score of 19.53, elementary teachers with SOL Tests had a mean score of 17, and elementary teachers without SOL Tests had a mean score of 11.58 on the variable “Personal Stage.” These groups are quite similar: secondary teachers with SOL Tests, elementary principals, secondary teachers without SOL Tests, central office instructional administrators, and secondary principals. In fact, there are only 1.86 units between the mean scores of secondary teachers without SOL Tests and secondary principals. The F ratio is 6.05, which indicates that there were significant differences between at least two of the groups. The Scheffe post hoc analysis indicated five significant differences in the mean scores. The mean score of 11.58 for elementary teachers without SOL Tests were significantly lower than the mean scores secondary teachers with SOL Tests (21.37), elementary principals (21.32), secondary teachers without SOL Tests (21.21), central office instructional administrators (19.58), and secondary principals (19.53). There were no significant differences for the other groups. The conclusion is secondary teachers with SOL Tests, elementary principals, secondary teachers without SOL Tests, central office instructional administrators, and secondary principals tend to have higher intensity of concerns in the “Personal Stage” category.

Table 7 Analysis of Variance- Personal Stage as Related to Users and Nonusers

	Central Office Administrators	Elementary Principals	Secondary Principals	Elementary Teachers (SOL)	Elementary Teachers (No SOL)	Secondary Teachers (SOL)	Secondary Teachers (No SOL)
N	31	31	32	30	33	41	33
Mean	19.58 *	21.32 *	19.53 *	17.00	11.58 *	21.37 *	21.21 *
SD	9.20	8.92	8.10	8.39	7.15	8.20	8.25
Source		df	ss	ms	F Ratio	p	
Between Groups		6	2513.23	418.87	6.05	.000	
Within Groups		224	15505.38	69.22			
Total		230	18018.61				
* $p < .05$.							

Management Stage

Mean scores were calculated for each of the seven groups, and these mean scores were compared by using a one-way analysis of variance to determine if there were significant differences in the seven means and hence differences in intensity level of concerns. It was possible to receive a high score of 35 or a low score of 0. Findings are presented in Table 8.

The mean scores for the seven groups of school personnel were: 20.34 for secondary teachers with SOL Tests, 18.23 for elementary principals, 18.03 for central office instructional administrators, 17.63 for elementary teachers with SOL Tests, 17 for secondary principals, 16 for secondary teachers without SOL Tests, and 12.42 for elementary teachers without SOL Tests. The F ratio of 3.11 was significant at the .05 level and hence it was concluded that there was a significant difference between at least two of the groups. The data from the Scheffe post hoc analysis indicated that the mean score of 12.42 was significantly lower than the mean score of 20.34 for secondary teachers with SOL Tests. Therefore, secondary teachers with SOL Tests have a higher level of concern in the "Management Stage." The analysis did not suggest that any other significant differences existed between the other groups.

Table 8 Analysis of Variance- Management Stage as Related to Users and Nonusers

	Central Office Administrators	Elementary Principals	Secondary Principals	Elementary Teachers (SOL)	Elementary Teachers (No SOL)	Secondary Teachers (SOL)	Secondary Teachers (No SOL)
N	31	31	32	30	33	41	33
Mean	18.03	18.23	17.00	17.63	12.42 *	20.34 *	16.00
SD	8.41	7.98	8.29	8.44	8.41	7.71	8.57
Source		df	ss	ms	F Ratio	p	
Between Groups		6	1265.73	210.96	3.11	.006	
Within Groups		224	15214.63	67.92			
Total		230	16480.36				
* p. < .05.							

Consequence Stage

The total mean scores were calculated for each of the seven groups of school personnel and compared via use of a one-way analysis of variance to determine if there were significant differences in the levels of intensity of concern about the innovation. The scores could range from 0 to 35. Table 9 presents a summary of these findings.

The data indicated that the mean scores for secondary teachers with SOL Tests (26.49), elementary teachers with SOL Tests (26.33), central office instructional administrators (25.45), secondary principals (24.63), and elementary principals (24.48) are relatively similar. The F ratio of 7.31 indicates that significant differences exist at the .05 level, for at least two of the groups. The Scheffe post hoc analysis revealed that the mean score of 16.24 for elementary teachers without SOL Tests were significantly less than the mean scores of 26.49 for secondary teachers with SOL Tests, 26.33 for elementary teachers with SOL Tests, 25.45 for central office instructional administrators, 24.63 for secondary principals, and 24.48 for elementary principals. Thus, indicating that these groups are more concerned with the consequences of the Standards of Learning. No significant differences were observed between the other groups.

Table 9 Analysis of Variance- Consequence Stage as Related to Users and Nonusers

	Central Office Administrators	Elementary Principals	Secondary Principals	Elementary Teachers (SOL)	Elementary Teachers (No SOL)	Secondary Teachers (SOL)	Secondary Teachers (No SOL)
N	31	31	32	30	33	41	33
Mean	25.45 *	24.48 *	24.63 *	26.33 *	16.24 *	26.49 *	22.61
SD	5.15	9.16	6.89	6.54	9.70	6.53	8.36
Source		df	ss	ms	F Ratio	p	
Between Groups		6	2541.41	423.57	7.31	.000	
Within Groups		224	12977.77	57.94			
Total		230	15519.18				
* $p < .05$.							

Collaboration Stage

The mean scores were calculated for each of the seven groups, and compared by using a one-way analysis of variance to determine if there were significant differences in the seven means, thus, constituting differences in the intensity of concerns. The scores could have been as low as 0 or as high as 35. Findings are presented in Table 10.

The mean scores for the seven groups of school personnel were: 24.32 for central office instructional administrators, 22.74 for elementary principals, 22.59 for secondary principals, 19.07 for elementary teachers with SOL Tests, 17.80 for secondary teachers with SOL Tests, 17.27 for secondary teachers without SOL Tests, and 13.36 for elementary teachers without SOL Tests. The F ratio of 7.54 was significant at the .05 level and therefore it was concluded that there were at least two groups with significant differences. The Scheffe post hoc analysis revealed that the central office instructional administrators (24.32), elementary principals (22.74) and secondary principals (22.59) were significantly different from elementary teachers without SOL Tests (13.36), hence central office instructional administrators, elementary principals, and secondary principals have higher concern levels than that of elementary teachers without SOL Tests. There were no significant differences between the other groups.

Table 10 Analysis of Variance- Collaboration Stage as Related to Users and Nonusers

	Central Office Administrators	Elementary Principals	Secondary Principals	Elementary Teachers (SOL)	Elementary Teachers (No SOL)	Secondary Teachers (SOL)	Secondary Teachers (No SOL)
N	31	31	32	30	33	41	33
Mean	24.32 *	22.74 *	22.59 *	19.07	13.36 *	17.80	17.27
SD	7.56	9.26	6.37	7.17	7.57	7.93	9.51
Source		df	ss	ms	F Ratio	p	
Between Groups		6	2882.44	480.41	7.54	.000	
Within Groups		224	14274.92	63.73			
Total		230	17157.36				
* $p < .05$.							

Refocusing Stage

The mean score scores were calculated and analyzed for the seven school personnel groups as they relate to the “Refocusing Stage.” It was possible to receive scores from 0 to 35. The mean scores were as follows: central office instructional administrators (17.26), secondary teachers with SOL Tests (15.76), secondary principals (15.16), elementary teachers with SOL Tests (14.97), elementary principals (14.87), secondary teachers without SOL Tests (13.33), and elementary teachers without SOL Tests (11.97). Findings related to this stage of concern are presented in Table 11.

The data indicated that there were no significant differences in the mean scores as indicated by the F ratio of 2.18 at the .05 level. Thus, it was concluded that there are no significant differences in the levels of intensity of the concerns held by the seven groups regarding “Refocusing Stage.”

Table 11 Analysis of Variance- Refocusing Stage as Related to Users and Nonusers

	Central Office Administrators	Elementary Principals	Secondary Principals	Elementary Teachers (SOL)	Elementary Teachers (No SOL)	Secondary Teachers (SOL)	Secondary Teachers (No SOL)
N	31	31	32	30	33	41	33
Mean	17.26	14.87	15.16	14.97	11.97	15.76	13.33
SD	7.27	6.20	5.85	6.33	6.66	5.99	7.58
Source		df	ss	ms	F Ratio	p	
Between Groups		6	564.91	94.15	2.18	.046	
Within Groups		224	9654.47	43.10			
Total		230	10219.38				
* $p < .05$.							

Research Objective Three

To collapse all administrators, all elementary teachers, and all secondary teachers into three groups forming three levels (administrators, elementary teachers, and secondary teachers) and determine if there were significant differences between the independent variable position/grade level as redefined and between the seven dependent variables of: Awareness, Informational, Personal, Management, Consequences, Collaboration, and Refocusing.

A one-way analysis of variance was run between the three scale means for each stage of concern of the Standards of Learning to determine if there were differences in the intensity levels held by school administrators, elementary teachers, and secondary teachers. If a significant F ratio resulted at the .05 level of probability, then a Scheffe post hoc analysis was run to determine which pair(s) of means differed. Results of these procedures for the seven stages of concern follow.

Awareness Stage

Table 12 shows the one-way analysis of variance that was conducted to determine if there were differences between school administrators, elementary teachers, and secondary teachers on the dependent variable, Awareness Stage. Mean scores for the three groups of school personnel were 8.91 for administrators, 7.31 for secondary teachers, and 6.21 for elementary teachers. The calculated F ratio of 5.59 was significant at the .05 level, indicating a significant difference between at least two of the means for the three groups. The Scheffe post hoc analysis revealed that the mean score of 6.21 for elementary teachers was significantly lower than the mean score of 8.91 for administrators on the variable "Awareness Stage." No significant differences were observed between elementary teachers and secondary teachers and administrators and secondary teachers.

Table 12 Analysis of Variance- Awareness Stage as Related to Position/Grade Level

		Administrators	Elementary Teachers	Secondary Teachers	
n		94	63	74	
Mean		8.91 *	6.21 *	7.31	
SD		6.32	3.77	4.27	
Source	df	ss	ms	F Ratio	p
Between Groups	2	290.17	145.09	5.59	.004
Within Groups	228	5921.49	25.97		
Total	230	6211.66			

* $p < .05$.

Informational Stage

The data indicated that the mean of 17.11 for administrators was the highest, followed by 16.92 for secondary teachers, and 12.60 for elementary teachers. The F ratio of 6.85 at the .05 level suggested that a significant difference existed between the means. The Scheffe post hoc analysis indicated that a significant difference in mean scores existed between the mean score of 12.60 for elementary teachers and the mean score of 17.11 for administrators and the mean score of 16.92 for secondary teachers. In fact the mean score for elementary teachers was significantly lower than the mean score of administrators and secondary teachers. There were no significant differences between the mean scores for administrators and secondary teachers. The conclusion is that

administrators and secondary teachers tend to have more concern about receiving information concerning the Standards of Learning. Findings are presented in Table 13.

Table 13 Analysis of Variance- Informational Stage as Related to Position/Grade Level

	Administrators	Elementary Teachers	Secondary Teachers
n	94	63	74
Mean	17.11 *	12.60 *	16.92 *
SD	8.24	9.05	6.95

Source	df	ss	ms	F Ratio	p
Between Groups	2	896.83	448.42	6.85	.001
Within Groups	228	14919.53	65.44		
Total	230	15816.36			

* $p < .05$.

Personal Stage

The mean scores for the three groups of school personnel were: 21.30 for secondary teachers, 20.14 for administrators, and 14.16 for elementary teachers. The F ratio of 14.12 was significant at the .05 level hence it was concluded that there were significant differences between at least two groups. The Scheffe post hoc analysis revealed that the elementary teachers mean score of 14.16 was significantly lower than the mean score of 21.30 for secondary teachers and 20.14 for administrators. This would indicate that administrators and secondary teachers tend to have more personal concerns regarding the Standards of Learning. The findings are summarized in Table 14.

Table 14 Analysis of Variance- Personal Stage as Related to Position/Grade Level

	Administrators	Elementary Teachers	Secondary Teachers
n	94	63	74
Mean	20.14 *	14.16 *	21.3 *
SD	8.69	8.17	8.17

Source	df	ss	ms	F Ratio	p
Between Groups	2	1985.53	992.77	14.12	.000
Within Groups	228	16033.07	70.32		
Total	230	18018.61			

* $p < .05$.

Management Stage

The three groups of school personnel were analyzed, and the findings are represented in Table 15. The data indicated that secondary teachers had a mean score of 18.41 which was slightly higher than the mean score of 17.74 for administrators which was more than two points higher than the mean score for elementary teachers (14.9). The F ratio of 3.33 suggested that a significant difference at the .05 level existed between mean scores of the groups. Further analysis of the data using Scheffe post hoc provided no additional information. Thus, the groups for the most part had similar concerns with respect to the management issues governing the Standards of Learning.

Table 15 Analysis of Variance- Management Stage as Related to Position/Grade Level

	Administrators	Elementary Teachers	Secondary Teachers
n	94	63	74
Mean	17.74	14.90	18.41
SD	8.16	8.76	8.33

Source	df	ss	ms	F Ratio	p
Between Groups	2	467.22	233.61	3.32	.038
Within Groups	228	16013.14	70.23		
Total	230	16480.36			

* $p. < .05$.

Consequence Stage

The group means were compared using a one-way analysis of variance statistical procedure to determine if there were significant differences between the mean scores. Findings relating to this stage of concern are presented in Table 16.

According to the data, the mean scores for administrators and secondary teachers were for practical purposes the same: 24.85 for administrators and 24.76 for secondary teachers. The mean for elementary teachers was 21.05, which is 3 points less than either of the mean scores for administrators and secondary teachers. The one-way analysis of variance F ratio of 4.97 statistically significantly at the .05 level, indicates a significant difference between mean scores for the three groups of school personnel. The Scheffe post hoc analysis indicated two significant differences in the mean scores: first, the mean score of 21.05 for elementary teachers was significantly less than the 24.85 mean score

for administrators; and second, the same 21.05 mean score for elementary teachers was also significantly less than the 24.76 mean score for secondary teachers. This was interpreted to mean that both administrators and secondary teachers were more concerned about the consequences during the implementation of the Standards of Learning than elementary teachers.

Table 16 Analysis of Variance- Consequence Stage as Related to Position/Grade Level

	Administrators	Elementary Teachers	Secondary Teachers
n	94	63	74
Mean	24.85 *	21.05 *	24.76 *
SD	7.18	9.71	7.60

Source	df	ss	ms	F Ratio	p
Between Groups	2	648.78	324.39	4.97	.008
Within Groups	228	14870.39	65.22		
Total	230	15519.18			

* $p < .05$.

Collaboration Stage

The data for this dependent variable indicate that the mean score for administrators (23.21) is relatively higher than the mean score for both secondary teachers (17.57) and elementary teachers (16.08). This would indicate that administrators have an intense concern regarding the “Collaboration Stage.” These mean scores were compared using a one-way analysis of variance to determine if there were significant differences in the three means. There was a significant difference in the mean score as

revealed by an F ratio of 17.73, which was significant at the .05 level. To determine the group differences the Scheffe post hoc analysis was run. The results indicated that the administrators were significantly different from both elementary and secondary teachers. There were no differences between any other groups. Findings are presented in Table 17.

Table 17 Analysis of Variance- Collaboration Stage as Related to Position/Grade Level

	Administrators	Elementary Teachers	Secondary Teachers
n	94	63	74
Mean	23.21 *	16.08 *	17.57 *
SD	7.76	7.86	8.61

Source	df	ss	ms	F Ratio	p
Between Groups	2	2308.85	1154.42	17.73	.000
Within Groups	228	14848.51	65.13		
Total	230	17157.36			

* $p < .05$.

Refocusing Stage

The participants completed the five questions relative to this stage of concern. The findings for this dependent variable are recorded in Table 18. The data revealed that the means for the administrators (15.76), secondary teachers (14.68), and elementary teachers (13.4) were fairly similar. The calculated F ratio of 2.4 was not significant at the .05 level indicating that no significant differences existed between the three groups.

Table 18 Analysis of Variance- Refocusing Stage as Related to Position/Grade Level

	Administrators	Elementary Teachers	Secondary Teachers
n	94	63	74
Mean	15.76	13.40	14.68
SD	6.48	6.63	6.80

Source	df	ss	ms	F Ratio	p
Between Groups	2	210.71	105.35	2.40	.093
Within Groups	228	10008.67	43.90		
Total	230	10219.38			

* $p < .05$.

Chapter Summary

The data analysis was conducted to determine the group profiles, to determine if significant differences existed between the teachers who administer SOL Tests and teachers who do not administer SOL Tests of the Standards of Learning, and to determine if there was a significant difference between the occupational position/grade level of the educators participating in this study. The analysis of the data suggests the following.

The group profiles that were derived appeared to correlate with the hypothesis of the CBAM. The results revealed that central office instructional administrators (N=31), elementary principals (N=31), secondary principals (N=32), and elementary (N=33) and secondary teachers (N=33) not responsible for administering SOL Tests possessed profiles indicative of nonusers. These groups scored highest on the Awareness,

Informational, and Personal Stages and lowest on the Collaboration and Consequences Stages. Which meant that these individuals were more concerned about themselves and the demands the Standards of Learning placed on them. In contrast, the two *user* groups scored the Management Stage, Refocusing Stage, and Personal Stage as their highest concerns. The Collaboration Stage was scored the lowest for both of these groups. This indicated that these groups were more focused on the nature and performance of the task.

A series of ANOVAs and Scheffes' post hoc analyses at the .05 level were conducted to analyze the data according to the group position/user or nonuser in relation to the seven stages of concern. The group of elementary teachers who were not responsible for administering SOL Tests (N=33), differed significantly from at-least one other group in every stage except the Refocusing Stage. In the Awareness Stage they scored significantly lower than central office instructional administrators did (N=31), meaning that elementary teachers had the least amount of concern in the Awareness Stage. The data for the Personal Stage revealed that they scored significantly lower than every group except elementary teachers responsible for SOL Tests (N=30). The elementary group not responsible for SOL Tests was significantly lower than secondary educators who were responsible for administering SOL Tests (N=41). In the Consequence Stage they were significantly lower than all other groups except for secondary teachers who were not responsible for SOL Tests (N=33). The results for the Collaboration Stage revealed that the mean score of elementary teachers who are not responsible for SOL Tests were significantly lower than central office instructional administrators, elementary principals (N=31), and secondary principals (N=32).

When the participants were grouped according to position/grade level in relation to the seven stages of concern. An analysis of variance and Scheffes' post hoc was conducted to determine if the groups were significantly different at the .05 level. The elementary group (N=63) was significantly different than the other groups in all of the stages of concern with the exception of the Management Stage and the Refocusing Stage. In the Awareness Stage they were significantly lower than the administrators were (N=94). The data from the Personal Stage and Consequence Stage revealed that the

elementary group differed significantly from both the administrators and secondary groups. Analysis of the Collaboration Stage indicated that the elementary and secondary (N=74) groups were significantly lower than the administrators' group.

Results revealed that central office instructional administrators (N=31), seem to be unworried about the impact of the innovation on them. Concerns were centered on the general characteristics, effects and requirements for the Standards of Learning use. The individuals in this group typically have limited or no experience with the Standards of Learning, but have heard of them. A further analysis of the central office instructional administrator group indicates that these individuals possessed profiles indicative of nonusers. Their scores were highest at stages 0, 1, and 2 and lowest at stages 4, 5, and 6.

Elementary educators were the most skewed. When examining group profiles the elementary administrators (N=31) and elementary teachers not responsible for administering SOL Tests (N=33) had scores indicative of nonusers. Their highest scores were in the Personal and Awareness Stages, respectively. This revealed that these individuals were more concerned with issues about self rather than concerns about the nature and performance of the task. However, as further analysis was conducted the elementary teachers not responsible for administering SOL Tests were more significantly different than the elementary administrators and elementary teachers responsible for administering SOL Tests. In fact, these individuals were more significantly different than all other groups involved in the study.

The results for the secondary educators revealed that the secondary administrators (N=32) and secondary teachers not responsible for administering SOL Tests (N=33) possessed scores indicative of nonusers. Their peak scores where in stages 0, 1, and 2 and their lowest scores where in stages 4,5, and 6. Secondary teachers responsible for administering SOL Tests scored highest in stages 3 and 6. As further analysis was conducted, results indicated that secondary teachers responsible for administering SOL Tests were significantly different than both the secondary administrators and secondary teachers not responsible for administering SOL Tests.

CHAPTER FIVE

Summary, Conclusions, and Recommendations

National reports indicate change is needed to improve America's education system. The review of literature addressed the change process and how leadership and organizational roles affect the process of change at the local level. The review of literature also discussed the Standards Movement and the impetus to raise academic standards in Virginia. The Standards of Learning Initiative is meant to improve student performance by setting clear performance goals, by measuring progress frequently, and by adjusting efforts based on results. To do this effectively reformers must possess a clear understanding of the attitudes, perceptions, and concerns of the practitioners during the implementation process.

The process of change is fundamental in educational reform efforts and needs to be understood. Knowledge structures, beliefs, and accumulated wisdom of practice exert influence on, and are influenced by, change in process. The complexities presented in the change process often impede attempts to accurately assess the change process in schools associated with educational reform efforts. "The process of thoughtful change should not be 'something we did' but 'something we do.'" (Prestine & Bowmen, 1993, p. 317).

The purpose of this study was to use the Concerns Based Adoption Model to investigate the Stages of Concern of educators in Superintendents' Region Seven in Virginia as they implemented the Standards of Learning. The CBAM is a developmental model that indicated the stages of concern educators possessed during the implementation of the SOLS. Stage 0 (Awareness) typically represented a non-user or an early awareness of the SOLs. At Stage 1 (Informational) the individuals were concerned about gaining information about the SOLs. Stage 2 (Personal) concerns were focused on the individuals concerns about how the SOLs were affecting them personally. Stage 3 (Management) indicated that the individuals were becoming concerned with the processes and the tasks of using the SOLs. Individuals scoring high in Stage 4 (Consequence) were concerned with the consequences placed on themselves as well as the student by the SOL guidelines. A high Stage 5 (Collaboration) score represented individuals concerned about

working collectively and collaboratively to successfully implement the SOLs. At Stage 6 (Refocusing) the individuals were focusing on exploring the benefits of the SOLs and on researching new ideas to improve them.

In order to address the research objectives of the study, the Stages of Concern Questionnaire (SOCQ) (Hall, Wallace, & Dossette, 1973) and demographic sheet was used. The SOCQ describes the feelings, perceptions, and attitudes of individuals as they implemented the Standards of Learning in Superintendents' Region Seven. The SOCQ consists of 35 concern related items. Each item was completed with a 0 to 7 Likert-scale response. The demographic sheet was used to collect data relating to the participant's occupational position (Users/Nonusers) and their position/grade level. The data were then entered into a SPSS database to answer the following research objectives:

1. To determine the Stages of Concern profiles of central office instructional administrators; elementary, and secondary building level principals; elementary and secondary teachers who administer SOL Tests; and elementary and secondary teachers who do not administer SOL Tests.
2. To determine if there were significant differences between the independent variable position Teachers who administer SOL Tests and teachers who do not administer SOL Tests with seven levels (Central Office Instructional Administrators, Elementary Principals, Secondary Principals, Elementary Teachers who administer SOL Tests, Elementary Teachers who do not administer SOL Tests, Secondary Teachers who administer SOL Tests, and Secondary Teachers who do not administer SOL Tests) and the seven dependent variables: Awareness, Informational, Personal, Management, Consequence, Collaboration, and Refocusing.
3. To collapse all administrators, all elementary teachers, and all secondary teachers into three groups forming three independent variables (Administrators, Elementary Teachers, and Secondary Teachers) and determine if there were significant differences between the independent variable position/grade level as redefined and between the seven dependent variables: Awareness, Informational, Personal, Management, Consequences, Collaboration, and Refocusing.

Data Collection/Data Analysis/Lesson Learned

In an attempt to expedite data collection and data analysis the researcher placed the SOC Questionnaire on a scantron sheet. This allowed the researcher to input the data into the SPSS database using a computer rather than manually. The researcher also attended the December Region Seven Superintendents meeting to solicit the Superintendents' support for the study. The researcher then sent 405 questionnaires, including a cover letter, demographic sheet self-addressed and stamped envelopes to the participants. Of the 405 surveys sent, 231 were returned within 24 days. The expeditious manner in which respondents completed and returned the surveys aided the researcher in analysis of the data. All of the surveys were usable.

To determine group profiles of the respondents the scoring instrument provided in the SOC Manual was used. One-way analyses of variance (ANOVAs) were used to determine if a significant difference existed at the .05 level between the three educational groups involved in the study in relation to position/teachers who administer SOL Tests and teachers who do not administer SOL Tests. Another set of one-way analyses of variance was conducted to determine if a significant difference at the .05 level existed between the groups' position/grade level and the seven stages of concern.

Conclusions

For this study, central office instructional administrators, elementary principals, secondary principals, and elementary and secondary teachers who are not responsible for administering SOL Tests were deemed nonusers. Elementary and secondary teachers who administered SOL Tests were the users. Based on the findings of this study conclusions were drawn about the educators in Superintendents' Region Seven involved in implementing the Standards of Learning.

The findings for research objective one indicated that the practitioners involved with implementing the Standards of Learning in Superintendents' Region Seven in Virginia are becoming more experienced with the Standards of Learning initiative. The interpretation of the profiles is based on the Stages of Concern Questionnaire protocols as described in the SOC Manual. According to Hall (1975), there is a developmental

progression in the types of concerns that practitioner's experience when implementing an innovation. As an individual begins to use the innovation their concerns generally develop from being most intense at Stages 0, 1, 2, to most intense at Stage 3, and ultimately to most intense at Stages 4, 5, and 6 (Hall, 1975). The results of this study reinforce the results of a study conducted by Rogers (1992) which indicated that as individuals are confronted with an innovation they go through Stages of Concern about the innovation.

Based on the findings of research objective two there were significant differences between the seven groups of educators (teachers who administer SOL Tests and teachers who do not administer SOL Tests) and the seven stages of concern. The elementary teachers who are not responsible for administering SOL Tests exhibited less concern about the SOLs than any other group at each concern level except the awareness stage. At the awareness stage the elementary teachers responsible for administering SOL Tests had the lowest level of concern. The Concerns Based Adoption Model has been shown to be a developmental model. As group members begin to use the innovation they move through the seven stages of concern. Individuals or groups experience a variety of concerns at any one point in time. The degree of intensity of these concerns differs with the individual's knowledge and experience with the innovation and similar innovations. Whether the person is using or not using, whether he or she is preparing for use, has just begun use or is highly skilled with the innovation will contribute to the relative intensity of different concerns. The study results support this theory.

The educators who were not responsible for administering SOL Tests expressed more intense concerns at the personal stages (awareness, informational, and personal). Educators responsible for administering SOL Tests expressed intense concern at the management and refocusing stages. The results of this study reinforce the results of a study conducted by Hall (1976) in which the participants profiles were indicative of their experience with the innovation, thus reinforcing the developmental nature of the concerns and the hypothesis of the Concerns Based Adoption Model.

The results for research objective three indicates that there were significant differences between the three groups of educators (position/grade level) and the seven stages of concern. The elementary teachers mean score was significantly lower than the other two groups on every concern level with the exception of the management and refocusing stages, thus position/grade level effects the intensity level of concern. These results support the study conducted by Roberts (1994) that indicated teachers from different departments and others educational levels sometimes possess an unwillingness to work collaboratively to implement an innovation.

Recommendations for Practice

Change is a process for and by people, and if it is to be successfully implemented consideration must be given to the attitudes, concerns, and feelings of the individuals involved in the process. This study focused on the change process, and the Stages of Concern of practitioners implementing the Standards of Learning in Superintendents' Region Seven in Virginia. Based on the findings of this study the researcher made the following recommendations.

The roles and responsibilities of the educators involved in the implementation of the SOLs are important. Virginia's educators must view the Standards of Learning initiative not as a barrier blocking the path to school success but as a way to creating more challenging learning experiences for students. With the appropriate planning, timing, and staff development, school divisions will create school cultures in which teachers work collaboratively across disciplines and grade levels to improve student outcomes.

Interaction between educators is crucial to the success of the Standards of Learning. Staff curriculum meetings should be held to allow teachers to coordinate their lesson plans across the curriculum so they coincide. According to Jacobs (1989), "the goal is a simultaneous effect as students relate the studies in one subject with the others" (p. 15).

Education is a cumulative process. Teachers and students build on the lessons learned in previous years. The same is true for the Standards of Learning. Thus, it is

recommended that collaboration be emphasized among all educators. It would also be beneficial if every educator attended workshops and staff development meetings to increase their awareness and interest in the Standards of Learning process. These workshops and staff development activities should concentrate on group dynamics that foster and provide skills for cooperation and coordination of Standards of Learning. It is imperative to the SOL movement that elementary and secondary educators work together to prepare students to be successful on the SOL tests as well as in their other endeavors.

The results regarding teachers who administer SOL Tests and teachers who do not administer SOL Tests appear to indicate that elementary teachers not responsible for administering SOL Tests have the least amount of concern regarding the implementation of the Standards of Learning. This would indicate that these elementary teachers do not feel as pressured or not as much emphasis has been placed on their success. It is believed that the concerns of these individuals should be identified so that the appropriate interventions can be applied. To implement change at the division level, educator concerns must be addressed. Those responsible must consider ways to have every educator “buy in” to the Standards of Learning initiative. Everyone involved in the implementation of the Standards of Learning should have similar consequences for not meeting the standards. Elementary teachers must feel the urgency of preparing students to be successful. A teacher’s individual standards are not enough; mandates must be met. All teachers must make every attempt to work together to meet the state’s Standards of Learning.

Recommendations for Research

This study should be replicated in the other Superintendents’ Regions in Virginia. These case studies would determine similarities and differences between educators throughout the state. Thus, allowing for reformers to gain a greater understanding of the practitioner’s perceptions and feelings about the Standards of Learning. It is also recommended that a longitudinal study be conducted to assess these practitioners as they continue to proceed through the process of implementing the Standards of Learning. This data might provide reformers with information on how long it takes to implement state

mandated reforms. This information could also assist reformers in overcoming the many barriers encountered when implementing educational change.

The researcher suggests that other studies be conducted that considers the morale of the participants. Do those educators possessing a low morale move through the concern continuum at a slower pace than those educators with higher morals? A study of educators' morale during the implementation of an innovation could provide reformers with valuable information that will assist them in becoming successful change agents.

The financial ability of the school divisions participating in the study to provide staff development meetings and workshops is important to the successful implementation of the Standards of Learning. Does the fiscal capacity of the school division affect the ability to provide professional development and in-service training to its' educators involved in the implementation of the Standards of Learning? A study that relates the fiscal capacity of school divisions to the ability to provide staff development and in-service training would provide useful information concerning the successfulness of the implementation of the Standards of Learning.

Chapter Summary

The Standards of Learning initiative represents Virginia's efforts in the "Standards Movement". This endeavor involves an extreme amount of educational change. The results of this study indicated that the educators in Region Seven are becoming experienced users of the Standards of Learning concept. The results also indicated that staff development activities are needed to increase the coordination and cooperation among the educators at the elementary and secondary grade levels as well as between the teachers responsible for administering SOL Tests and those who do not administer SOL Tests.

According to Savage (1992), professional development activities are needed as practitioners become involved in an innovation. In addition to formal professional development, teachers must have the freedom to experiment in order to feel comfortable with new ways they are assessing their students. Therefore, the school culture and school leadership must provide support for teachers to coordinate, develop, and adjust their

teaching strategies so that they might successfully implement the SOLs. Hence, insufficient professional development and training can become a barrier to the change process. Could it be those educators with the least amount of understanding and knowledge have the least amount of desire to implement the Standards of Learning initiative? This could have a negative affect on every teacher's performance and every student's outcome.

Reflections

The concept of this paper began with my desire to understand the process of change. It evolved into a complex study investigating and interpreting the perceptions, feelings and attitudes of educators as they implemented the Standards of Learning initiative in Superintendents' Region Seven in Virginia.

I originally hypothesized that the levels of concern would correlate with the practitioners' occupational position and their knowledge of the innovation. I believed that central office administrators and school principals because of their roles as instructional leaders for the school division would possess a higher level of concern than the other educators involved in the study. However, the findings indicated differently.

The amount and scope of educational change needed to successfully implement the Standards of Learning is evident. It is believed the results of this study will provide reformers with an assessment of the various perceptions educators in Superintendents' Region Seven have regarding the implementation of the Standards of Learning. Thus, providing implications and recommendations that could aid reformers as they continue to implement the Standards of Learning and as they implement future initiatives.

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APPENDICES

APPENDIX A
QUESTIONNAIRE

INSTRUCTIONS

CONCERNS QUESTIONNAIRE

Name (Optional)

PLEASE USE A NO. 2 LEAD PENCIL, MAKE ALL MARKS COMPLETELY DARK, CHOOSE ONLY ONE RESPONSE PER QUESTION.

The purpose of this questionnaire is to determine what people who are using, or thinking about using, various programs or practices are concerned about at different times during the innovation adoption process. A good part of the items on this questionnaire may appear to be of little relevance or irrelevant items, please circle "0" on your scale. Other items will represent those concerns you do have, in varying degrees of intensity, and should be marked higher on the scale.

For Example:

This statement is very true of me at this time. 0 1 2 3 4 5 6 7

This statement is somewhat true of me now. 0 1 2 3 4 5 6 7

This statement is not at all true of me at this time 0 1 2 3 4 5 6 7

This statement seems irrelevant to me. 0 1 2 3 4 5 6 7

Please respond to the items in terms of **YOUR PRESENT CONCERNS** or how you feel about your involvement or potential involvement with **Standards Of Learning (SOL)**. We do not hold to any one definition of this innovation, so please think of it in terms of **your own perception of what it involves**. Please respond to each item in terms of **your present concerns** about your involvement of potential involvement with Standards of Learning (SOL).

Your response is crucial to this study! Thank you for taking time to complete this task and please return the questionnaire to your building level supervisor.

SURVEY

Stages of Concern in Implementing the Standards of Learning (SOL)

Section 1 Please respond to the following statements as they relate to the Standards of Learning

0	1	2	3	4	5	6	7
Irrelevant	Not True of me	Somewhat true of me now			Very true of me now		

0 1 2 3 4 5 6 7

1. I am concerned about students' attitudes toward the Standards of Learning.
2. I now know of some other approaches that might work better than the Standards of Learning.
3. I don't even know what the Standards of Learning are.
4. I am concerned about not having enough time to organize myself each day in relation to the Standards of Learning.
5. I would like to help other faculty in their use of the Standards of Learning.
6. I have very limited knowledge about the Standards of Learning
7. I would like to know the effect of reorganization on my professional status.
8. I am concerned about conflict between my interest and my responsibilities.
9. I am concerned about revising my use of the Standards of Learning.
10. I would like to develop working relationships with both our faculty and outside faculty using the Standards of Learning.
11. I am concerned about how the Standards of Learning affects students.
12. I am not concerned about the Standards of Learning.

Stages of Concern in Implementing the Standards of Learning (SOL)

0	1	2	3	4	5	6	7
Irrelevant	Not True of me	Somewhat true of me now			Very true of me now		

0 1 2 3 4 5 6 7

13. I would like to know who will make the decisions in the new system.

14. I would like to discuss the possibility of using the Standards of Learning.

15. I would like to know what resources are available if we decide to adopt the Standards of Learning.

16. I am concerned about my inability to manage all that the Standards of Learning require.

17. I would like to know how my teaching or administration is suppose to change.

18. I would like to familiarize other departments or persons with the progress of this new approach.

19. I am concerned about evaluating my impact on students in relation to the Standards of Learning.

20. I would like to revise the Standards of Learning's instructional approach.

21. I am completely occupied with other things besides the Standards of Learning.

22. I would like to modify our use of the Standards of Learning based on the experiences of our students.

23. Although I don't know about the Standards of Learning, I am concerned about things in the area.

24. I would like to excite my students about their part in the Standards of Learning.

Stages of Concern in Implementing the Standards of Learning (SOL)

0	1	2	3	4	5	6	7
Irrelevant	Not True of me	Somewhat true of me now			Very true of me now		

0 1 2 3 4 5 6 7

25. I am concerned about time spent working with nonacademic problems related to the Standards of Learning.
26. I would like to know what the use of the Standards of Learning will require in the immediate future.
27. I would like to coordinate my effort with others to maximize the effects of the Standards of Learning.
28. I would like to have more information on time and energy commitments required by the Standards of Learning.
29. I would like to know what other faculty are doing in the area.
30. At this time, I am not interested in learning about the Standards of Learning.
31. I would like to determine how to supplement, enhance or replace the Standards of Learning.
32. I would like to use feedback from students to change the program.
33. I would like to know how my role will change when I am using the Standards of Learning.
34. Coordination of tasks and people working with the Standards of Learning is taking too much of my time.
35. I would like to know how the Standards of Learning are better than what we have now.

Stages of Concern in Implementing the Standards of Learning (SOL)

Section 2 Demographics

36. Please indicate the response that best describes your occupational position.
(ON THE SCAN TRON SHEET)

- (1) Central Office Instructional Administrator
- (2) Elementary Building Level Principal/Asst. Principal
- (3) Secondary Building Level Principal/Asst. Principal
- (4) Elementary Teacher (**WHO ADMINISTER SOL TESTS**)
- (5) Elementary Teacher (**WHO DO NOT ADMINISTER SOL TESTS**)
- (6) Secondary Teacher (**WHO ADMINISTER SOL TESTS**)
- (7) Secondary Teacher (**WHO DO NOT ADMINISTER SOL TESTS**)

APPENDIX B
PERMISSION TO USE QUESTIONNAIRE

311 Crabapple Street
Bluefield, VA 24605

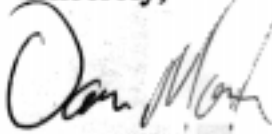
Shirley Hord
Senior Research Associate
Office Communications
Southwest Educational
Development Laboratory
211 East Seventh Street
Austin, TX 78701

I am presently pursuing a doctoral degree in Educational Leadership at Virginia Polytechnic Institute and State University. The topic of my dissertation pertains to the Stages of Concerns school division personnel have when implementing the Standards of Learning at the local level. The dissertation will concern innovation, how innovation is being adopted, and at what stage of concern the adoption of the innovation is currently being perceived in the school system.

I am requesting permission to reproduce the Stages of Concern Questionnaire as the measurement instrument in my dissertation. At this time, a random sample of educators in Superintendents' Region Seven in Virginia will be selected for this study. Proper credit for use and reproduction of the instrument will be given to SEDL.

Thank you for your cooperation and assistance.

Sincerely,



Darrin Martin

*Permission granted for use
as stated for SEDL*

*Joyce S. Pelluso
Director, Institutional Communications
11 August 1999*

APPENDIX C
INITIAL LETTER

November 30, 1999

Name
School
Address
City, State, Zip

Dear Sal Last Name,

You have been selected to participate in a study that deals with the concerns of central office instructional administrators, building level principals, and teachers during the implementation of the Standards of Learning.

It is anticipated that the questionnaire will take approximately 15 minutes to complete. You may notice that your questionnaire is marked with a code number. This number will be used for record purposes only. Please be assured that your responses will be kept confidential, as we are interested in the aggregated dots and not individual responses. Only researchers will have access to the completed instruments.

A high response rate is essential to this study. If possible, please return the completed questionnaire by Friday, December 10, 1999.

With your help, the results of this study will directly benefit the educators in this region and across the state, who are currently struggling with the implementation of the Standards of Learning. Your participation is greatly appreciated and will provide vital feedback to educational policy makers as they analyze the Standards of Learning initiative.

Sincerely,

Darrin Martin
Assistant Principal
Graham High School
Tazewell County Schools

APPENDIX D
LETTER TO PRINCIPALS

November 30, 1999

Dear Principal,

Would you please distribute these surveys to the teachers named on each envelope? After you and your staff have completed the survey please collect the envelopes and send them back to me by Friday, December 10, 1999. A self-addressed envelope has been provided. If you or staff have any questions please contact me at Graham High School (540) 326-1235.

Your cooperation will be greatly appreciated.

Darrin Martin
Assistant Principal

APPENDIX E
LETTER TO SUPERINTENDENTS

November 30, 1999

Dear Superintendent,

Would you please distribute these surveys to the individuals named on each envelope? After you and your staff have completed the survey please collect the envelopes and bring them Region Seven Superintendents' meeting on Wednesday, December 15, 1999. I will be attending the meeting as a guest of Mr. Woodrow Mullins, and I will collect the packets at that time. If you or staff have any questions please contact me at Graham High School (540) 326-1235.

Your cooperation will be greatly appreciated.

Darrin Martin
Assistant Principal

VITA

Darrin Tyrone Martin was born on August 18, 1968 in Bluefield, West Virginia. Darrin was an only child and lived with his parents, Barbara and Frederick Martin, in Bluefield.

Darrin developed an interest for mathematics early in life. Throughout Darrin's educational career he strove to increase his mathematical skills by enrolling in every math course his high school offered. With the encouragement of his family and friends Darrin decided to pursue a degree in mechanical engineering. Upon graduating high school Darrin enrolled in the University of Tennessee's mechanical engineering program. After completing one semester he transferred to Bluefield State College and completed an Associates Degree in Mechanical Engineering. During Darrin's third year of college he changed his major from engineering to mathematics education.

Upon graduation from Bluefield State College, Darrin taught mathematics for one year at Welch Junior High School in McDowell County, West Virginia. After his first year he was displaced due to West Virginia's efforts to downsize their teacher population. At this point Darrin contacted Tazewell County Public Schools in Virginia, and in 1992 he began teaching geometry at Richlands High School in Richlands, Virginia.

As Darrin became more acclimated to his new position, his mother, urged him to enroll in graduate school. Over the next two years Darrin pursued a Masters of Science in Educational Leadership from Radford University. During this time Darrin's philosophy of education broadened, as well as his career goals.

In 1995 Darrin graduated from Radford University and was given an opportunity to become an administrator in Tazewell County Public Schools. Darrin accepted the position of assistant principal at Richlands High School where he worked for four years. During this time, Darrin decided to pursue an Ed. D in Educational Leadership from Virginia Polytechnic Institute and State University. In 1999, he was transferred to his present position as Assistant Principal of Graham High School.

Darrin and his wife, Laura, reside in Bluefield where they plan to soon start a family.