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The University of Southern Mississippi

**UNDERTANDING THE CHANGE STYLES OF TEACHERS TO IMPROVE
STUDENT ACHIEVEMENT**

by

Arlene May Green Bigby

**Abstract of a Dissertation
Submitted to the Graduate Studies Office
of The University of Southern Mississippi
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Education**

May 2009

ABSTRACT

UNDERSTANDING THE CHANGE STYLES OF TEACHERS TO IMPROVE STUDENT ACHIEVEMENT

by Arlene May Green Bigby

May 2009

The topic of this dissertation is the understanding of teacher change styles to improve student achievement. Teachers from public schools in a state located in the northern plains were surveyed regarding their Change Styles (preferred approaches to change) and flexibility scores. The results were statistically analyzed to determine if there were differences in change styles and flexibility scores when compared for level of certification, gender, length of teaching career, subject area taught, and size of school in which the educator was working. The results were also analyzed for any differences in the Change Styles and flexibility scores between teachers working in Public Schools which made AYP for the 2006-2007 school year and those schools which did not make AYP for that year.

The only significant relationship found in this study was between change style and experience. Almost 89% of teachers with 16-20 years of experience chose the risker change style as their preferred approach to change. In six of the seven experience ranges teachers identified the refocuser change style as their preferred approach to change. Close to 89% of teachers with 31-35 years of experience chose the refocuser change style as their preferred way to approach change.

When the data was looked at overall, only 4.1% of respondents had a flexibility score in the high range. 25.6% of respondents had flexibility scores in the low range,

30.6% in the low to moderate range, and 39.7% in the moderate to medium high range. In all areas; certification, gender, experience, subject area, school size, and AYP; the most preferred change style was refocuser, followed by relater, reasoner and risker.

Learning about preferred change styles and flexibility could provide teachers insight into their own approach to change and give them opportunities to increase their willingness to change. Administrators who understand that a large number of teachers prefer the refocuser change style may be able to focus initial change efforts on providing the type of information preferred by the people using this style.

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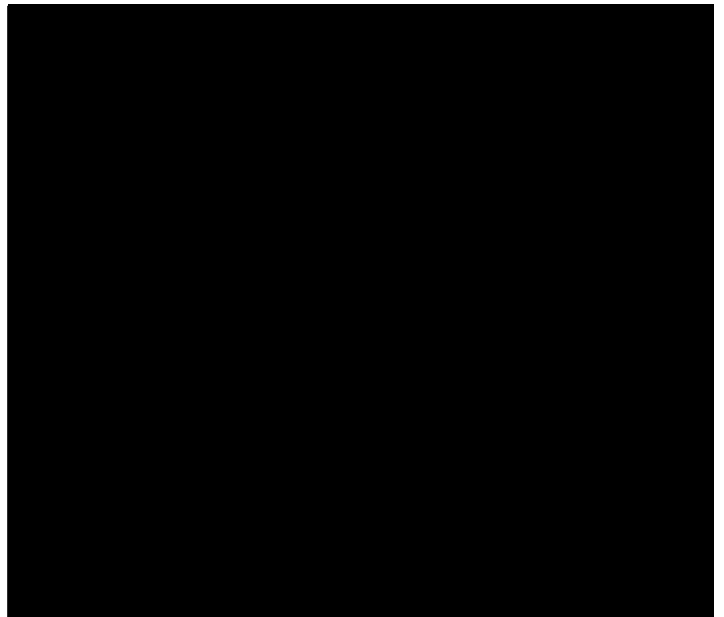
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Saving the most important for last, I want to thank my husband and daughter for their unfailing faith in me. Without their love and patience I would not have persevered and would certainly not feel the sense of accomplishment that I do at completing this dissertation. I want them to know I appreciate the sacrifices they made that allowed me to reach not just this goal, but many others along the way. I feel truly blessed to have had this experience and appreciate the many wonderful people who have played a part in my journey.

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CHAPTER I

INTRODUCTION

Student achievement depends on teacher quality. “In the U.S., a growing consensus about the importance of teachers has led to reforms of teacher education, the development of professional teaching standards, and the No Child Left Behind requirements that schools employ only ‘highly qualified teachers’” (Darling-Hammond, 2005, p. 237). Marzano, Pickering, and Pollock (2001) identified classroom teachers as the most important factor affecting individual student school success. The ability to maintain quality classroom teaching lies with individual teachers, and giving them a better understanding of how they approach change may strengthen their ability to make adjustments in their teaching that will make them more effective.

There has been a growing consensus that teachers who want to increase their effectiveness should reflect on their classroom practices and the needs of their students. They could then seek out strategies which would help them add to their teaching “toolbox,” or repertoire of techniques, in ways which would meet student needs and positively influence student achievement. Snowden and Gorton (2002) found that teachers must be seen as real performers in their classrooms in order to be effective. Using only one method of teaching may not be enough to effectively teach all students.

This ability to increase effectiveness is dependent on the willingness of educators to change. Training is unlikely to make a difference if educators do not apply this training and change their practices in the classroom. As Reeves (2006) wrote, “the cause of success in improving student achievement is not the brand name of the product but the degree of implementation by the teacher” (p. 78).

Administrators who understand the change process may be better able to address resistance to change and bring about effective reform. Evans (1996) found in his research that it is extraordinarily difficult to lead change, and school leaders need to be willing to look beyond the structural components of education to focus on the human factor—people—to accomplish change.

Administrators are responsible for providing instructional supervision and support that facilitate the professional growth of the teachers they lead. “Leadership today is based on maximizing the human potential rather than the old tell-them-how attitude” (Spillane & Regnier, 1998, p. 163). Developing an understanding of the change process and how teachers approach change may help administrators make changes in their leadership practices that positively affect both teacher effectiveness and bring about improved student achievement.

Background

The primary goal of educators is to help their students gain the knowledge needed to achieve success both academically and personally. Reaching this goal has become even more challenging as educators face an increasing number of obstacles affecting their students and education. As Tomlinson and McTighe (2006) found in their study,

Simultaneously, teachers find it increasingly difficult to ignore the diversity of learners who populate their classrooms. Culture, race, language, economics, gender, experience, motivation to achieve, disability, advanced ability, personal interests, learning preferences, and presence or absence of an adult support system are just some of the factors that students bring to school with them in almost stunning variety. (p. 1)

The challenges facing educators and their students are difficult, and it would be easy to give in to the increasing pressure to blame students' failures on factors beyond their control. However, if schools are to be truly committed to helping all students succeed they need to have teachers who will take responsibility for student learning (Deal & Peterson, 1999).

If educators and schools focus on what they can do, not on the things over which they have no control, they may be able to bring about effective changes that will improve student achievement. Hoylater (cited in Spillane & Regnier, 1998) wrote, "We know that all the families in our communities send us the best children they have. And it is our fundamental duty to give them the best we have" (p. 158). Changing their classroom instruction based on student needs is one way educators can give their students the best opportunity for success.

Darling-Hammond (2000) concluded that the expertise of the teacher is the single most important factor in student achievement. Teachers who are well trained have access to professional development based on research, and a willingness to change their classroom strategies in response to their students' needs can increase the effectiveness of their classroom instruction. Herring (2001) found that teachers are the ones who can make a difference. They are the ones who know their students' needs and have the ability to respond to those needs.

Teacher education programs play an important role in developing teacher quality. "Since public education has...become a national imperative, and now we know teachers make a difference in student achievement, it is not surprising that the preparation of teachers is, again coming under greater scrutiny" (Education Commission of the States

[ECS], 2004, p. 2). A number of studies and reports have addressed the idea that teacher preparation needs to change (American Council on Education, 1999; ECS, 2004; Cochran-Smith, 2003; Davis, Williams, & Griffin, 2003). Beste-Guldborg (2006) wrote, "Even though there is general agreement that traditional teacher preparation programs must evolve to keep pace with student needs of the 21st century, there is a lack of agreement on what to do" (p. 3).

Professional development can provide teachers with the training they need to improve their instruction in order to raise student achievement levels.

Research indicates that high-quality professional development is essential for high-quality teaching. Given the complexity of teaching and learning in today's schools, high-quality professional development is necessary to ensure that all teachers are able to meet the needs of a diverse student population, effectively use data and become active agents in their own professional growth. (Center for Teaching Quality, n. d., p. 25)

Teachers who seek to improve their teaching methods by taking advantage of professional development opportunities will have wasted their time unless they follow through with implementing the classroom strategies they learn during this training in order to help their students achieve success. Evans (1996) found that the numbers of classrooms that will undergo real change or restructuring are dependent on the number of teachers that make the needed changes in their classroom practices and beliefs. Effective changes require adoption and implementation by individual teachers in individual classrooms.

Understanding the change process could help administrators provide more

effective instructional supervision for their teachers. This should result in improved classroom instruction increased student achievement.

Statement of the Problem

If better education for all students is the goal of the educational systems of the United States new ways to bring about effective reform need to be identified and implemented. As Oliva (2001) stated,

The public school, one of our society's fundamental institutions, faces a plethora of contemporary problems, some of which threaten its very existence. We need cite only the intense competition from both secular and sectarian private schools; proposals for tax credits and vouchers which may be used at any school, public, private, or parochial; the advent of charter schools and the increase in the number of home schools to illustrate the scope of problems currently confronting the public schools. Change in the form of responses to contemporary problems must be foremost in the minds of curriculum developers. (pp. 28-29)

This means that educators face the necessity of changing instructional strategies in order to meet the needs of students. Anderson (1993) found that changes in education have little value or effect if those changes are not in teaching and learning.

Recognizing the need to make changes in classroom instruction may not be enough. Evans and Hopkins (1988) asked, "Why are some teachers as individuals more receptive than others to educational ideas? What motivates teachers, and how do they learn to utilize and incorporate any idea into their functional paradigms?" (p. 212).

Administrators who understand the advantages of finding the answers to these questions can reflect on their own attitudes about change as well as provide teachers with

insight into their own psychological state and level of flexibility. This insight may facilitate personal growth by individual educators and increase the chances of change efforts being more successful by improving the way administrators and teacher interact. Senge (1990) found that how people think and interact with others and their environment affects how organizations work. In the end, if individuals want to change entrenched practices and policies the first step is to change the thinking about those practices and policies. In order to change shared understanding and visions and develop the ability to work cooperatively, people need to first change how interactions take place.

In order to be effective, any proposed changes would be educationally sound.

Oliva (2001) stated, "Curriculum development is the planned effort of a duly organized group (or groups) that seeks to make intelligent decisions in order to effect change in the curriculum" (p 110). Intelligent decisions about education should begin with research.

Educational change should be directed by administrators who serve as instructional leaders who are prepared to facilitate reform that makes schools more effective. The goal is an increase in the achievement level of all students. Fullan (2002) found that a key component of systemic, sustainable education reform was effective school leadership.

Purkey and Smith (1982) discussed the school culture model which "assumes that changing schools requires changing people, their behaviors and attitudes, as well as school organization and norms" (p. 66). Anderson (2001) believed that teachers do not usually see a need for change in education because they enter the teaching profession with a positive view of education.

Administrators can use research and data to demonstrate the need for change to

educators. Joyce and Weil (1973) posed this question that administrators should ask themselves when contemplating reform in their schools,

Can we also, through a combination of studies analyzing teaching styles and the effects of instruction on styles, come to an understanding of how teachers can study their behavior and select the instructional programs most likely to increase their flexibility and effectiveness? (p. 59)

Principals and superintendents who understand the attitudes towards change held by teachers may be able to plan and implement school reform more effectively by helping teachers understand that change is necessary in order to meet the needs of all students. By giving educators the knowledge and tools they need to approach change in a positive way, they can facilitate effective change which may result in raising student achievement. Fullan (2002) described the principal of the future, or a Cultural Change Principal, in this way:

Cultural Change Principals display palpable energy, enthusiasm, and hope. In addition, five essential components characterize leaders in the knowledge society: moral purpose, an understanding of the change process, the ability to improve relationships, knowledge creation and sharing and coherence making. (p. 17)

Helping teachers understand the change process can also help them deal with the personal stress created by the pressures inherent in making changes in other areas of their lives. There are many resources available to help raise teachers' awareness of the change process. One book, *Who Moved My Cheese* (Johnson, 2002), has been used for this purpose. Haw, a character in this book, summarized what he had learned about dealing with change in this way:

- Change Happens: They Keep Moving the Cheese
- Anticipate Change: Get Ready for the Cheese to Move
- Monitor Change: Smell the Cheese Often So You Know When It Is Getting Old
- Adapt to change Quickly: The Quicker You Let Go of Old Cheese, The Sooner You Can Enjoy New Cheese
- Change: Move with the Cheese
- Enjoy Change!: Savor the Adventure and the Taste of New Cheese
- Be Ready to Quickly Change Again and Again: They Keep Moving the Cheese (p. 74)

This book illustrates the concept of change and emphasizes the idea that change is constant. Educators face the need to change on a daily basis in their classrooms, but how they respond to that need will determine the effect on student achievement.

Administrators who have an understanding of the change process based on research may be better prepared to deal with helping their schools reform while providing their teachers the knowledge and tools they need to make effective changes that will benefit all of their students. Evans (1996) found that in order for humanity to thrive in the future it is critical that how work is approached and how workers are educated changes.

Various theories on change have been proposed and a number of books written on the subject. One of these, *The Flexibility Factor* (Wonder & Donovan, 1989), uses a questionnaire to assess the change style of individuals. Based on the scores obtained on this instrument, people are classified as riskers, relaters, refocusers, and reasoners. They are also given a flexibility score. This questionnaire could be used as a tool to help

for positive change in their classrooms and schools.

Research Questions

This study was designed to answer these research questions:

1. What are the Change Styles (preferred approaches to change) and flexibility scores of certified K-12 teachers working in public schools located in a Northern Plains state and are there differences in these when compared for level of certification, gender, length of teaching career, subject area taught, and size of school in which the educator was working?
2. Is there a difference in the Change Styles (preferred approaches to change) and flexibility scores between teachers working in public schools located in a Northern Plains state which made Adequate Yearly Progress (AYP) for the 2006-2007 school year and those schools which did not make AYP for that year?

Definition of Terms

The following is a list of definitions for terminology used in this study.

Adequate Yearly Progress (AYP)-A measure of progress in student achievement required by President George W. Bush's *No Child Left Behind Act* (NCLB). In the state where this study was conducted this is based on meeting objectives in these areas: reading proficiency score, reading test participation rate, math proficiency score, math test participation rate, attendance rate, and graduation rate.

Change-Friendly Quotient Survey-An instrument developed by Wonder and Donovan (1989) designed to measure an individual's flexibility in managing change.

Change Style-An individual's preferred approach to change. In this study, change Style prefers to one of four categories identified by Wonder and Donovan in their book

Style prefers to one of four categories identified by Wonder and Donovan in their book *The Flexibility Factor*. The four categories are Risker, Relater, Refocuser, and Reasoner.

Flexibility-An individual's adaptability to new or changing situations; an individual's willingness to try new strategies; "Openness to new ideas and technology. A willingness to adapt to changing demographics. An appreciation for variety in how people think and behave" (Wonder & Donovan, 1989, pp. 7-8).

Reasoner-Individuals in this category approach change thoughtfully based on past experiences and research. They can irritate others with over planning.

Refocuser-Individuals in this category are goal oriented and periodically review and revise their ways of doing things in response to problems. They approach change practically, but may overlook details.

Relater-Individuals in this category relate well to people and will seek out the opinions of others rather than doing their own research. If exposed to a number of views, they may have difficulty sorting them out.

Riskier-Individuals in this category are risk takers mentally, physically or both. They are generally extroverts who handle change easily, but sometimes make mistakes because of rushing into change.

Delimitations of Study

This study was delimited to K-12 educators from a single state located in the northern part of the United States. It was further limited to the educators teaching in the schools chosen for the sample used in this study.

Significance of the Study

A great deal of attention has been paid to the challenges facing students and

educators in the 21st century. Kowalski (2004) made this statement regarding changes in student populations,

The demographic profile of the typical public school student has changed considerably in the last 50 years. As an example, the population in many cities and towns has become increasingly diverse. In addition, more children are now living in poverty, more come from one-parent families, and more come to school with emotional, physical, and psychological problems. (p. 31)

Pollock (2007) wrote this regarding changes in student populations,

Today's classrooms are a different place. We celebrate diversity and open the doors of public schools to all children, regardless of race, origin, ability, socioeconomic status, or gender. Appropriately, the focus of our curriculum has expanded to suit this more varied student population, and our school improvement efforts are driven by a commitment to help all the students in our classrooms learn and make progress. (p. 16)

More and more students have entered classrooms in recent years bringing with them challenges and difficulties that decrease their chances of succeeding in traditional school systems. Jones and Jones (1998) explained it this way,

Concern for students at risk has become a major theme in U.S. education. The term *at risk* has generally referred to students who are likely to drop out of school. The Business Advisory Commission of the Education Commission of the States (ECS) has extended this concept to include youngsters who are unlikely to make successful transitions to becoming productive adults. (p. 48)

In order to be effective educators should seek out new strategies designed to meet

the needs of their students, regardless of the challenges they face. Tomlinson and McTighe (2006) listed these nine attitudes and skills that typify teachers who help all learners:

- They establish clarity about curricular essentials.
- They accept responsibility for learner success.
- They develop communities of respect.
- They build awareness of what works for each student.
- They develop classroom management routines that contribute to success.
- They help students become effective partners in their own success.
- They develop flexible classroom teaching routines.
- They expand a repertoire of instructional strategies.
- They reflect on individual progress with an eye toward curricular goals and personal growth. (p. 40)

These authors concluded by saying that if students are to be more successful as learners, teachers need to become stronger professionals in each of these areas.

Too often educators seek to meet the needs of their students in ways that require the least possible change in themselves and the way they teach. Evans (1996) found that teachers seek out changes external to themselves or ways to more effectively do what they have always done. Teachers would prefer that others have to make the changes, or if they must change that they only have to adjust what they are already doing rather than make any comprehensive changes.

In order to bring about effective, comprehensive school reform that results in improved student achievement, teachers need to make fundamental changes in the way

they teach. Evans (1996) said this about why school reform efforts have failed.

One of the central lessons we think we have learned about previous rounds of innovation is that they failed because they didn't get at fundamental, underlying, systemic features of school life: they didn't change the behaviors, norms and beliefs of practitioners. (p. 5)

Effective changes in education start with individual educators making changes in how they teach based on research and the needs of their students. Effective systemic change builds on effective change by individuals. The only way for organizations to learn is through individuals who learn (Senge, 1990).

Administrators who recognize the importance of helping educators deal with the need to change may be more successful at fostering positive attitudes about change. As Spillane and Regnier (1998) stated, "The more enlightened, visionary and collegial breed of superintendent, who is today's model, embodies the core understanding of the new-school world order, which simply is this: In educational leadership, as in life, people are everything" (p. 157).

Administrators will face resistance to change from many sources, starting with themselves. Reeves (2006) made this statement regarding his personal attempts to bring about school improvement,

My reflections forced me to recognize that conditions were not changing, people were not changing, and results were not changing-all because my leadership decisions and actions were not changing. Reflection forced me to admit that I had been as resistant to change as the others whom I had accused of being resistant and insufficiently enthusiastic to my favored initiatives. (p. 51)

This resistance will need to be addressed before effective change can occur.

Educators are facing new challenges every day as they search for ways to meet the needs of an increasingly diverse student population. The first place to look for changes that will have a positive impact on their students is to themselves and the way they teach. They might be guided by finding answers to the question posed by Reeves (2006), "Given that we cannot change student characteristics before children walk into school, what can we do once they are entrusted to our care?" (p. 74).

Overview of Study

This study built on the work of Glantz (1998) and Kisner (1993). Their research was the starting point and the literature review for this study examined current information addressing the change process as it related to education, educators, and student achievement. The same instrument, the *Change-Friendly Quotient Survey* (Wonder & Donovan, 1989), used by these researchers was also used for this study.

This study attempted to identify the change styles and flexibility scores of educators working in public schools located in a Northern Plains state and look for patterns when compared for certification level, gender, length of career, and content area taught. It also looked for correlations between change styles/flexibility scores and whether schools make AYP or not.

The purpose of this study was to help educators understand the change process in a way that helped them identify their personal change style and flexibility level. Understanding different ways to approach change could provide a foundation for exploring ways to improve their teaching in response to their students' needs.

CHAPTER II

REVIEW OF RELATED LITERATURE

This chapter reviews the literature related to change processes of individuals, change processes of organizations, and education reform. Specific areas focused on include the need for change in education, educational reform efforts, resistance to change, addressing resistance to change, and facilitating effective change in education that will positively influence student achievement.

Theoretical Framework

There has been a large amount of research on school reform which has focused on how school systems or organizations need to change. Sparks and Hirsh (2000) stated,

Virtually every effort to improve the quality of education since the publication of *A Nation at Risk* in 1983 has focused on overcoming deficits in student knowledge or on reshaping the structure and organization of schooling. These reforms--ranging from encouraging more students to take harder courses to establishing charter and voucher schools, from testing and holding schools accountable to lowering class size, and from raising student self esteem to creating schools within schools—all have largely left the classroom untouched.

(p. 1)

These reform efforts, focusing only on changing school systems or organizations, generally have not brought about effective, long-lasting change.

Recently, there has been more emphasis on the impact individual educators have on improving student achievement. “The most important factor affecting individual student success in schools is the classroom teacher (Marzano et al., 2001). A great deal of

of effort has been put into providing teachers the right training and professional development in order to increase the quality of classroom teaching. A study on teacher working conditions by the Center for Teaching Quality (2006) stated,

Research indicates that high quality professional development is essential for high quality teaching. Given the complexity of teaching and learning in today's schools, high quality professional development is necessary to ensure that all teachers are able to meet the needs of a diverse student population, effectively use data and become active agents in their own professional growth. (p. 25)

However, providing professional development is not enough to guarantee that high quality teaching will take place. "For staff development activities to truly affect the classroom, they must change what educators think and do" (Shroyer, 1990, p. 2). Unless teachers implement what they have learned during professional development in their classrooms, nothing will change. "It is therefore important for administrators to look at both the psychological and structural processes in the school that will intrinsically motivate teachers to change" (Glantz, 1998, p. 29).

There has also been research on how individuals view and approach change, as well as on how to help individuals deal with change more effectively (Kolb, 1985; Kirton, 1994; Myers, 1990). Wonder and Donovan (1989) developed the *Change-Friendly Quotient Survey* which identified four preferred change styles--risker, relator, refocuser, and reasoner--as well as a flexibility score for individuals completing the survey. When Wonder and Donovan's four change styles are compared with the classifications of other researchers, many similarities are found. Glantz (1998) and Kisner (1993) both compared Wonder and Donovan's styles with those of several other

researchers including Kolb (1985), Kirton (1994), and Myers (1990). "All change classifications, developed over the years, are similar in their characteristics" (Kisner, 1993, p. 10).

Helping educators reflect on change at a personal level may empower them to make changes in their classrooms that will raise student achievement and could eventually result in effective systemic change as well. Change needs to take place in each classroom first or, as Pollock (2007) wrote, "You can have a significant effect on your group of students" (p. 18). Using a reflective tool like the *Change-Friendly Quotient Survey* may well provide educators insight into their willingness level for change as well as their approach to change. This information could allow educators to take more advantage of the learning opportunities provided in professional development and may help them recognize the need for personal change as they implement these practices in their classrooms in the end raising student achievement.

The Need for Change in Education

As the 21st century approached education, was under tremendous pressure to change, improve, and be accountable. Deal and Peterson (1999) found that there was much agreement that schools in the United States need to make major improvements. This pressure continued as the new century began. Over the last several years, schools have been inundated with change related proposals, research, and mandates (Snowden & Gorton, 2002).

Some pressure for change came from educators themselves as they realized the makeup of their classrooms was changing. Students came into classrooms with different needs than in previous years. Compared to 30 years ago, demographics showed students

were more likely to be minority, not born in America, limited in English skills, and at a lower socioeconomic level (Spillane & Regnier, 1998). Educators recognized that the ways they were teaching were not always meeting the needs of the students in their classrooms and many began looking for new strategies. Tomlinson and McTighe (2006) wrote,

Responsive or differentiated teaching means a teacher is as attuned to students' varied learning needs as to the requirements of a thoughtful and well-articulated curriculum. Responsive teaching suggests a teacher will make modifications in how students get access to important ideas and skills, in ways that students make sense of and demonstrate essential ideas and skills, and in the learning environment-all with an eye to supporting maximum success for each learner. (p. 18)

The population of the United States has continued to become more culturally diverse and this has had a great impact on the classrooms in public schools. Banks (2004) said,

The increasing ethnic, cultural, language, and religious diversity in nation-states throughout the world has raised new questions and possibilities about educating students for effective citizenship. Since World War II, nation-states throughout the Western world have become more diversified because of immigration and other factors. (p. 289)

Another source of pressure came from evidence that demonstrated many students, particularly minorities, were not acquiring the skills they needed from the educational systems they attended in the United States. Jones and Jones (1998) found that a large

number of students were at a higher risk of failing in school. Even more minority students, in particular African-American, Hispanic-American and Native American students, had high rates of dropping out of school. In 1990, 10% of these minority groups dropped out of school. The National Center for Education Statistics (NCES) listed the high school dropout rate in 2005 as 10.7% for students overall and 27% for Hispanic students, demonstrating an even greater reason for concern than in 1990. Jones and Jones (1998) identified these six major areas of deficits experienced by at risk students:

1. A history of poor adult-child relationships with an accompanying need for positive, supportive relationships
2. A tendency to lack a sense of personal efficacy or power and the associated need to experience this by better understanding the learning process and developing a sense of personal responsibility and power
3. A closely related focus on external factors that influence their behavior and the need to learn to accept responsibility for their behavior and to see how they can control their own learning and behavior
4. Low self-esteem, especially related to such school behaviors as achievement and peer friendships, and the need to develop and validate a positive self-esteem through positive social interactions and school success
5. A poorly developed sense of social cognition-an inability to understand others' feelings or points of view and take this into account when making decisions and the need to learn to understand others' responses and to work cooperatively with others
6. Poor problem-solving skills and the need to develop these skills as a means to

enhance self-efficacy and self-esteem as well as to develop an important life-long skill. (pp. 48-49)

In addition to the standards to which educators held themselves; pressure for change in education came from groups outside the field of education. Educators, parents, government agencies, business and industry, and private foundations and organizations have all joined in the continuing arguments on the need for changes in how today's students are educated (Evans, Stewart, Mangin, & Bagley, 2001). At the top of the education policy agenda, and sparking spirited debates by many groups, is teacher quality.

One of the most significant pressure sources from outside the field of education is the federal government, and the major source of pressure from this source currently is the *No Child Left Behind Act of 2001* with its many mandates affecting education. NCLB is the reauthorization of the *Elementary and Secondary Education Act* (ESEA), first passed by Congress in 1965. In its present form it called for highly qualified teachers in every classroom by 2006. Regardless of how educators may feel about this mandate, change has been and will be necessary to meet the requirements of NCLB.

Even without mandates created by politicians, it is evident that change is unavoidable and necessary. Oliva (2001) said, "Change is both inevitable and necessary, for it is through change that life forms grow and develop" (p. 34). Education is not the only area affected by this reality. Armstrong (1993) found that society is ever-changing and that as changes take place the knowledge and skills necessary for success will probably change too. Schools and educators must respond and adjust as society changes to continue meeting the evolving needs of their students.

Educational Reform Efforts

The pressure on education and educators is not new. As Evans (1996) stated, "If we broaden our perspective on reform to examine its impact on educators, we see that the context of change in schools has never been more challenging. The opportunities are unprecedented, but so are the pressures" (p. xii). Educators have been inundated with information on new ideas, programs and policies, all aimed at bringing about school reform. Burton (2002) found that changes in society and the resulting needs influence fads in education. The popularity of a variety of teaching strategies goes in and out of favor based upon both political and social concerns.

In 1983 the landmark report, *A Nation at Risk: An Education Manifesto*, was published and warned that, "Our Nation is at risk. Our once unchallenged preeminence in commerce, industry, science, and technological innovation is being overtaken by competitors throughout the world" (National Commission on Excellence in Education, 1983, p. 1). Since then, United States presidents and other politicians have been attempting to bring about education reform by developing and mandating education platforms. Glantz (1998) found that between 1983 and 1985 over 700 pieces of legislation related to school reform were passed. In addition, in the last 30 years, thousands of articles discussing how to improve pedagogy were written.

Lunenberg and Ornstein (2000) summarized a number of reports on education written and distributed by the federal government between 1983 and 1999. Included in this summary were the education platforms of two recent U.S. Presidents: George H. W. Bush and Bill Clinton.

George H. W. Bush's plan was outlined in the report *National Goals for*

Education. This plan was referred to as “America 2000” and emphasized the need to provide basic skills and knowledge for all students, particularly those considered at-risk.

Bill Clinton’s plan was outlined in the report *Goals 2000*. This plan built on the goals of “America 2000” and emphasized the following: the development of national standards in core subjects; greater involvement of parents; and partnerships between schools, parents, and businesses.

In 2001, President George W. Bush introduced his plan, No Child Left Behind (NCLB), which emphasizes teacher quality and gives deadlines for having students become proficient (performing on grade level), especially in reading and math. This plan also outlines requirements that schools must meet to make Adequate Yearly Progress (AYP), which is based on progressive levels of proficiency in reading and math.

States have also developed plans with their own sets of requirements affecting education. NCLB requires states to establish guidelines to meet the requirement of demonstrating Adequate Yearly Progress (AYP). Many states, including the one where this study was conducted, have contracted with educational testing companies to develop Criterion Referenced Tests (CRT) based on state curriculum standards. AYP is determined in the state where the study took place by using a formula looking at a variety of data including: students’ scores on these CRTs; students’ scores on the IOWA of Test Basic Skills; participation rates on both tests; and high school graduation rates (Montana Office of Public Instruction, 2006).

So far, none of these plans seem to have been successful in bringing about comprehensive, effective reform in education. Evans (1996) stated, “Innovative ideas and promising projects have repeatedly failed to move beyond ardent advocacy and local

promise to full, broad adoption. The structure of schooling and the practice of teaching have remained remarkably stable” (p. xi).

Often, reform plans are changed because of a change in policy or administration, and educators are required to respond to different guidelines, requiring more need for change. Undergoing constant changes either in work or other areas of life can cause people to experience a high level of stress. Individuals who understand change may be better able to handle this stress (Johnson, 2002).

This continuous pattern of new requirements happens in part because educators and non-educators view school systems from different perspectives. Bolman and Deal (1999) identified four lenses that determine how people assess and respond to situations. A human resource frame focuses on peoples’ skills and needs and emphasizes the need for a climate that is caring and trusting. A structural frame focuses on policies, goals, efficiency, and results and emphasizes the need for a clear chain of command. A political frame focuses on power, conflict, negotiations and compromise. A symbolic frame emphasizes rituals, ceremonies, stories, and other symbolic forms communicating hope and faith. Deal and Peterson (1999) said,

In the world of education, some lenses are more prominent than others. For example, policymakers rely very heavily on the structural frame in developing mandates for school reform. Nearly all the reform initiatives of the past three decades have emphasized goals, standards, restructuring, or similar changes. Conversely, school leaders-teachers and principals-tend to read and respond to day-to-day challenges from the human resource frame. (p. 9)

Reform efforts that see schools only as systems have not been successful in

bringing about effective, sustainable changes. Deal and Peterson (1999) believed that school reforms focusing only on the structure or organization of a school system will never be able to build an effective, living system that will meet the needs of all students. They went on to emphasize the importance of the human factor and culture in bringing about positive change.

Policymakers expect educators to meet their standards and requirements, despite evidence that this does not bring about effective reform in education. As Snowden and Gorton (2002) wrote,

The rationale for change in education seems to be based on the following premises: (1) even if the status quo is not necessarily bad, there is usually room for improvement; (2) while all change does not necessarily lead to improvement, improvement is not likely to occur without change; (3) unless we attempt change, we are not likely to know whether a proposed innovation is better than the status quo; and (4) participation in the change process can result in greater understanding and appreciation of the desirable features of the status quo and can lead to a better understanding and appreciation of, and skill in, the change process itself. (p. 131)

Change for the sake of change or as the result of a personal crusade by an influential group has not typically brought about effective education reform.

Plans that have focused on adopting programs, while ignoring the needs of the educators who must implement those programs, have often failed. Evans (1996) said, "It is not about student needs and best classroom practice, which are the core and cause of reform, but about educators' needs and best leadership practice, which are the keys to its

implementation” (p. xiv). The best programs available will not be effective unless educators implement them effectively in their classrooms.

Resistance to Change by Educators

Even when the need for change is recognized, bringing it about is difficult. It is not easy to bring about even necessary, unavoidable change in public education (Orlich, 1989). Oftentimes educators realize that change is necessary, but do not recognize the need for them to change how they teach as individuals. As Reeves (2006) found in his research,

Leaders and teachers who say, ‘I’ll do whatever is needed in order to improve student results, as long as we don’t have to change the schedule, modify the curriculum, improve teaching practices, or alter leadership behavior,’ are in the Loser quadrant. (p. xxi)

Educators often attend required workshops, agree with the concepts being taught, and then return to their classrooms and continue to teach the way they always have.

Evans (1996) wrote,

Teachers must not only want to implement a change, they must feel that they can achieve it. They need to see change not only as appropriate for students and as promising better learning but also as something practical that they and their school can manage. (p. 85)

Educators do not see the need for change if they feel what they are doing is working, or if they feel the blame for problems should be put on outside influences, such as poor parenting and societal pressures.

Most reform plans address the system as a whole, without recognizing the roles of

each individual within the system and the importance of the changes they must make.

Hartzell (2003) found that most people see change as positive until someone says they are the ones who need to change. This author went on to list a few reasons people resist change including; being creatures of habit, needing to feel in control, and the belief that it will lessen professional status. Deal and Peterson (1999) found, "While policymakers clamor for change, parents and local residents are very often ambivalent about new approaches to teaching and testing. Paradoxically, they may want change as long as things don't look too different from what they know" (p. 129). Educators are used to working in their classrooms on their own, without input from other teachers, and are often not prepared to change this way of teaching.

Parish and Aquila (1996) explained some of the reasons they found for resistance to change in their research when they described the "cultural ways" that exist in schools. These include language, dress, tradition, values, rewards, and other ways of operating that exist within a system. Most staff members of a school system pick up these "ways" without even realizing they are doing so. Deal and Peterson (1999) stated,

At the heart of a school's culture are its mission and purpose-the focus of what people do. Although not easy to define, mission and purpose instill the intangible forces that motivate teachers to teach, school leaders to lead, children to learn, and parents and the community to have confidence in their school. (p. 24)

Once educators have become part of the culture, the way they operate within that culture is affected, including the way they teach and respond to suggestions for change. They often fail to recognize the need for change because they are so enmeshed in the cultural ways of their organizations. This is true even when the behaviors ruled by the

culture cause dysfunction that threatens the organization's survival (Parish & Aquila, 1996). Glantz (1998), in his research, identified the tendency of school culture to be a factor inhibiting the ability and/or desire of educators to change. He also found that educators' resistance to change can be attributed to their tendency to teach the way they were taught.

Kane and Darling (2002) listed eight "barriers to change": a lack of urgency; political self-interest; fear of the unknown; resistant school culture and bureaucracy; low trust; lack of teamwork; arrogant attitudes; lack of leadership support. Which of these factors influence resistance to change varies from group to group and between individuals. Becoming aware of these differences may help administrators design plans for reform that address and overcome the resistance to change, as well as give educators information on how to deal with change more effectively and comfortably.

It is important to recognize that certain group reactions to change can also be identified. The reactions of factions within a system can influence how effectively change can be implemented. Evans (1996) stated, "Whatever their emphasis, with age and experience, teachers, even the most creative and dedicated, become less motivated to change their practices and beliefs" (p. 109). This indicates an area to consider when looking at the components of change. Sarason (1996) wrote, "Change was typically harder to obtain and continue at the secondary level. Three teacher attributes--years of teaching, sense of efficacy, and verbal ability--significantly affected project outcomes" (p. 77). This would indicate a possible difference in how teachers at different levels approach change. Evans (1996) wrote,

Philosophically, many educators, particularly at the secondary level, where there

tends to be a strong investment in one's subject area, are reluctant to accept changes that they see as compromising quality and debasing standards without really helping lower-achieving students. (p. 82)

The differences found in attitudes of teachers towards standardized achievement tests and the use of standards in education based on teaching assignment and experience may also show up in how educators respond to change. The variances in researchers' conclusions would indicate that more research is needed on this topic.

Even when a school system has created an environment that supports innovation and change, individuals within the system will respond to change differently. Evans (1996) postulated because teachers are both the main agents of change and the targets of that change, as well as opponents to change at times, a fierce paradox is created in school improvement. Teachers who resist change are expected to be the ones who will bring the proposed changes about. This affects the dynamics of a group attempting to bring about reform in their system. Many plans for school reform concentrate on defining how the system needs to change while ignoring what changes individuals will have to make to bring about those changes in the system. Evans (1996) believed that individuals taking part in reform need to find ways to personalize change and discover their own meaning in it, if they are to make the necessary adaptations. Policymakers sometimes seem to expect educators to automatically go along with their plans and make the changes necessary to make those plans work. This may lead to ineffective or unsuccessful attempts to change education.

Addressing Resistance to Change

Recognizing the existence of resistance and its various components is the first step in overcoming that resistance. Reeves (2006) wrote, "Resistance to change is an organizational reality" (p. 96). Some of the components of resistance are related to culture, the "ways" of groups or systems. Other components are based on individual beliefs or attitudes. Both of these areas need to be addressed by administrators in making and implementing plans for reform if change is to be effective and successful. Change will never become easier, without risk, free of opposition, or universally popular. This is the reality of organizational change (Reeves, 2006).

Administrators have an essential role in bringing about effective change in their schools and must be active participants in the change process. Evans (1996) made this statement, "The leader must change first—or at least very early. The leader, that is, must not just advocate but exemplify the change before asking staff to do so" (p. 202). If an administrator is not actively involved in the process of bringing about change, staff members will follow suit and not become involved either. Administrators serve as role models and if they are willing to accept change themselves may help their staff members be more open to exploring change. Barth (2002) argued that the primary, and most difficult, job of an instructional leader is to bring about changes in the existing culture of a school.

Clear, ongoing communication about the issues affecting schools will help people understand what changes need to take place and why. In Chapter 10 of *The Superintendent of the Future*, Bohen (as cited in Spillane & Regnier, 1998, p. 224) stated, "Keeping teachers well informed is easier than getting them involved in new ways for

which they have little preparation or experience.” An administrator who is an effective communicator can build support for change among staff members, parents, students, and the community. Keeping staff members informed so they know what is happening helps counteract one factor in resistance to change which is a fear of the unknown. Evans (1996) found that a key goal of leading people is helping them become ready for change. Change agents must help people change their current thinking and perceptions in fundamental ways so they will be open to accepting innovations. Administrators who keep teachers informed are facilitating the change process.

Effective communication also means the administrator needs to establish and use two-way communication. This allows stakeholders to make suggestions, ask questions, and believe their input has an effect. “There is also an increased motivation level when teacher feel they have sufficient influence on the events and activities that occur in the school” (Palczewski, 1999, p. 4). Reform should be a team effort and input needs to be sought from stakeholders. Holayter stated, “Except in a few lingering evolutionary backwaters, the autocratic, my-way-or-the-highway type of superintendent is obsolete” (Spillane & Regnier, 1998, p. 157). Parish and Aquila (1996) wrote,

If we think that we can use accountability processes (e.g., achievement tests, task supervision, and restrictive selection processes) to improve learning, we are gravely mistaken. You cannot direct, control, or supervise relationships or conditions into effectiveness. You can only impose and directly supervise obedience. (p. 301)

People who are included in the change process will be more supportive of plans that are made. Another of a leader’s key functions is to empower individuals to use their

own knowledge and creativity to succeed in meeting the goals resulting from an organization's vision. Empowerment pays returns in increased support and involvement by stakeholders (Spillane & Regnier, 1998).

Administrators can also facilitate change by providing the support and resources that educators need to bring about effective change:

Those supervisory tasks that have such potential to affect teacher development are direct assistance, group development, professional development, curriculum development and action research. Direct assistance (A) is the provision of personal, ongoing contact with the individual teacher to observe and assist in classroom instruction. Group development (B) is the gathering together of teachers to make decisions on mutual instructional concerns. Professional development (C) includes the learning opportunities for faculty provided or supported by the school and school system. Curriculum development (D) is the revision and modification of the content, plans, and materials of classroom instruction. Action research (E) is the systematic study by a faculty of what is happening in the classroom and school with the aim of improving learning.

(Glickman, Gordon, & Ross-Gordon. 2001, p. 12)

Glickman, et al. (2001) defined supervision as acting in ways that enable teachers to improve their instruction of students. In their roles as instructional supervisors, administrators can arrange times for teachers to meet and collaborate, provide professional development opportunities, and use shared decision-making strategies that allow stakeholders to be part of the change process.

Flexibility, or the ability to adapt to new or changing situations, is also an important concept in the study of change in education. Research has found that educators are aware of the importance of flexibility, or the ability to adapt. Perry (1993) found that teachers identified personal flexibility as the main factor influencing individuals' attitudes toward state-mandated collaboration. This was regardless of the age or experience level of the teachers.

There is reason to believe this would also hold true for other kinds of reform efforts, or plans requiring educators to deal with change. Evans (1996) stated, "Changes challenge deeply embedded behavioral regularities of classrooms and schools and require teachers to abandon the beliefs, assumptions, habits and roles of a lifetime" (p. 80). Many teachers will have to learn how to deal with this kind of change effectively. A teacher's flexibility may indicate how adaptable they are, influence how they react to change, and affect how well they actually implement changes at the classroom level. Joyce and Weil (1973) found in their work that the success of the teaching process depended on the style used by teachers. They also stated that teachers should work on using personal flexibility to learn how to employ a variety of teaching strategies.

Glantz (1998) used the Change Survey developed by Wonder and Donovan (1989) to measure teacher flexibility. This survey measures the ability to choose from several alternatives when approaching change events and puts people into four categories; risker, relater, refocuser and reasoner.

How individual educators react to reform and implement related changes in their classrooms will influence how much change actually takes place in the entire system and how effective that change is. "Change in education is inevitable and educational research

needs to look further into the psychological characteristics of educators in order to identify those characteristics that are positively correlated with change” (Glantz, 1998, p. 2). How effectively educators implement reform plans will also determine how successful change is in terms of improved student achievement. Reeves (2006) said that once the decision is made to begin organizational reform, it is vital that change is focused on the areas that will have the most impact on student achievement.

Administrators can facilitate change, but rarely can they mandate effective, enduring change. Becoming familiar with the research on how people respond to change can help administrators work with individuals to make them more open to the possibilities of change; identify the educators most supportive of change efforts, and realize not everyone will be willing to change. This will make it possible to adjust plans for reform so they can be more effective. Reeves wrote, “If you wait for people to have buy-in, be happy, or change belief systems, then change will never happen” (p. 97).

Some studies have been conducted to show the relationship between the psychological states of teachers and how they deal with change in order to find more effective change models. Senge (1990) wrote,

People with a high level of personal mastery share several basic characteristics. They have a special sense of purpose that lies behind their visions and goals. *For such a person, a vision is a calling rather than simply a good idea.* They see “current reality” as an ally, not an enemy. They have learned how to perceive and work with forces of change rather than resist those forces. (p. 142)

In 1980, Joyce and McKibbin conducted a study comparing where teachers were on Maslow’s hierarchy of psychological states with how well they used professional

development opportunities to continue their growth as educators. They found that the higher a teacher was on Maslow's hierarchy, the more likely they were to take advantage of opportunities for professional development and the more likely they were to implement what they learned.

Another study (Joyce & McKibbin, 1982) expanded on these ideas. They developed five categories describing individuals' behavior in relation to professional development. The categories and their descriptions are:

1. **Omnivores**-The most active users of learning opportunities in all three domains (formal, informal, personal). They tend to be happy and self-actualizing.
2. **Active Consumers**-Not as active as omnivores, but still using learning opportunities in at least one or two domains.
3. **Passive Consumers**-These educators will take advantage of opportunities offered them, but will not seek out opportunities on their own.
4. **Resistant**-These people are often threatened by change and oppose it in one of three ways, actively, surreptitiously, or by withdrawing. Their resistance can derail reform attempts.
5. **Withdrawn**-Do not participate in learning activities and require a great deal of outside energy to become involved.

McKibbin and Joyce believed there was a correspondence between the levels they identified and Maslow's psychological states.

An educator's ability to incorporate what he or she learns during professional development into the classroom indicates a willingness to change. Examining the

psychological states of teachers may help administrators to develop plans for change that are appropriate for their staff and more likely to be accepted. Making teachers become aware of these states may facilitate their self-awareness and motivate them to work on change for themselves as well as the school. Covey (1990) wrote,

The being/seeing change is an upward process-being changing seeing, which in turn changes being, and so forth, as we move in an upward spiral of growth. By working on knowledge, skill, and desire, we can break through to new levels of personal and interpersonal effectiveness as we break with old paradigms that may have been a source of pseudo-security for years. (p. 47)

Facilitating Effective Change

In order to bring about successful, effective school reform, administrators should be prepared to help educators understand their own resistance to change and how to overcome it so that they will be able to implement the programs shown to increase student achievement. Glantz (1998) found in his research that studies of school improvement have focused on the structural obstacles to change while overlooking the many psychological barriers.

These psychological factors or barriers need to be taken into consideration if improvement attempts are to be successful, and teachers' attitude toward change is just one of the psychological factors that is often overlooked. Janiak (1997) used this definition of attitude in his research, "an idea charged with emotion which predisposes a class of actions to a particular class of social situations" (p. 3). Janiak (1997) identified teacher attitude as a critical factor that reform processes often over-looked, which may account for so many plans failing. Janiak's work also showed the importance of teacher

attitude in educational reform and identified teacher attitude as essential in successful reform initiatives.

Evans (1996) stated, "Reform initiatives that call for new ways of thinking about teaching and learning and new ways of relating among adults in a school community depend on real engagement, genuine investment, and extra effort on the part of teachers" (p. 170). Instead of only considering what changes a system needs to make, planners need to consider what changes individuals will need to make to help the system change and improve. Evans (1996) recognized this when he wrote about real change being personal and needing to be accomplished person by person.

Educators need to find ways to meet the challenges of mandates like NCLB while maintaining focus on what is best for all students. Deal and Peterson (1998) said it this way:

Some schools give their heart and soul to seeking high standards of learning for all students. In these cultures teachers focus on the learning needs of everyone, from the most highly succeeding to the furthest behind. Time and attention is spent working on the improvement of learning across the board. Celebrations are convened when all students succeed. Success is defined by how many students reach their learning potential. (p. 26)

Educators need to overcome both their own hesitancy to change and their resistance to outside pressure and look for ways to use the components of this act to benefit students and education as a whole.

Education and educators would benefit if methods could be found and implemented to ensure proposed changes are designed to truly effective and beneficial to

students, not just initiated to satisfy the latest requirements of the newest mandate. As Spillane and Regnier (1998) stated, "Good research is available, but schools fail to implement it" (p. 60). Student achievement can only be raised if educators are willing to implement effective classroom practices. Oliva (2001) found that changes in people will bring about changes in curriculum.

A factor that is not given enough attention in planning reform is how change affects people, both individually and collectively. Evans (1996) made this statement, "Overlooking and underestimating the human and organizational components of change has routinely sabotaged programs to improve our schools (and, for that matter, programs to improve our corporations and government agencies as well)" (p. 91). Anyone involved in planning for and implementing school reform must understand the human element of change. The responses of individuals to the plans for change also need to be considered so resistance can be counteracted. The best planned structural organizational changes have only slight chances of success if individual changes in behavior, attitudes, and skills do not take place as well (Adams & Salvaterra, 1998).

In order to facilitate effective change the research on change needs to be utilized. The information gained should be used to educate educators:

Our purpose in teaching about change is to increase the teachers' knowledge by helping them to understand what they can do to bring about change, to recognize why there is resistance to change, and to help participants learn that change is a process, not an event. (Kane & Darling, 2002, p. 51)

Knowledge empowers educators and enables them to make choices based on that knowledge. It may help educators to become aware of their own resistance to change so

that they can make changes willingly. Recognizing and understanding the barriers to change can help administrators address individuals' concerns and hopefully make them more receptive to change, while also allowing individuals to make changes on their own that will benefit them both personally and professionally.

Anderson (1993) described six stages of systemic change:

1. Maintenance of the old system; this is the stage prior to recognition that the old system is not working and changes must take place.
2. Awareness; this is the stage where stakeholders realize the current system is not working and must be changed.
3. Exploration; this stage is characterized by an examination of other systems in search of ideas.
4. Transition; More people commit themselves to implementing changes and begin to take risks during this stage.
5. Emergence of New Infrastructure; during this stage the new ideas are being implemented and generally accepted.
6. Predominance of the New System; in this stage the new system is in place and new ideas are being considered for further improvement.

These ideas could be applied to a school system attempting to make effective systemic change or viewed from an individual perspective.

Recognizing the stages of change illustrates the idea that change is a process, not an event. It demonstrates the need to allow time for change to take place. Too often a plan is developed and introduced and instant results are expected. Evans (1996) described organizational change as being accomplished in increments and real change as being

personal. Allowing time for effective change to take place is necessary for successful reform to occur.

It is also important to recognize that different school systems or even different schools within a system may have different needs and respond to change differently. Firestone and Herriott (1982) said, "Research now under way at Research for Better Schools highlights the differences between elementary and secondary schools and suggests that the basic organizational level may necessitate different approaches to improving effectiveness and even different definitions of effectiveness" (p. 51). One example of the differences found in this research is the percentage of teachers at each level who see the emphasis given to basic skills as the most important goal: elementary 44%, secondary 30%. Other examples include the idea that elementary schools have more of a shared sense of purpose and elementary principals have more opportunities to be instructional leaders. Secondary schools are often larger and more complex. Hargreaves and Goodson (2006) said that high schools had more difficulty adapting to the changing needs of their students. Other research suggests that teachers of different subject matters may approach change differently as well. Boyle, While, and Boyle (2004) found that teachers of English, mathematics, and science at the elementary level participated in professional development at different rates, with 97% of English teachers, 96% of mathematics teachers, and 79% of science teachers responding to their surveys who have participated in professional development. Hargreaves (1994) said,

The concerns of older teachers are often different from those of younger ones.

Secondary teachers see their work differently from elementary or primary

teachers, and teachers of some subjects differently from teachers of others. Men teachers tend to view what they do differently from women teachers, teachers in one country or system differently from teachers in another, and teachers in the present differently from their counterparts in the past. (p. xiii)

These research findings emphasize the need to be aware of the possible differences in how individuals and groups approach change when deciding what changes are necessary and how to bring about effective changes.

Research on effective schools can also provide some information that can be used in developing and facilitating plans for effective school reform. Purkey and Smith (1982) analyzed several studies on effective schools. They identified two factors common to effective schools: high expectations for student achievement on the part of school staff, and strong instructional leadership on the part of the school principal or another staff member. These authors also found identified five other factors common to most effective schools: well-defined school goals and emphases; staff training on a schoolwide basis; control by staff over instructional and training decisions; a sense of order; a system for monitoring student progress; and good discipline. They concluded that any process of change had to be linked to school culture in order to be successful. This is called the school culture model and assumes that in order to change schools the behaviors and attitudes of people need to change as well as the school organization and norms. Purkey and Smith (1982) found that when the whole school culture is impacted, change efforts are more likely to be successful. An advantage to this model is that it is equally applicable to both elementary and secondary schools because it is based on improving the organizational effectiveness of a school and is not specific to grade-level or curriculum.

Schmidt and Datnow (2005) recognized that different reform models focused on different aspects such as pedagogical practices and curriculum, school culture or structure, and a combination of these. They went on to discuss how this affected teachers' understanding of the reform efforts and how they affected their teaching.

Summary

The pressure on education to change is great and is increasing. Education needs to change in order to give students the skills they need to succeed. In 1993, Anderson observed that as global society becomes even more complex, administrators in America realized that the education system needed basic changes to keep pace. That remains true as many students continue to leave school without even the most basic of skills:

It is generally acknowledged that American high schools are not nearly as good as they need to be. Large numbers of students--30 % or more--do not even make it to graduation. And even among those who do, far too few are prepared for post-secondary education or work. (Education Trust, 2005, p. 3)

Meeting students' needs should be the motivation for changing education. Mandates like NCLB have been met with resistance by educators who resent the interference of "outsiders" telling them what they should be doing.

Views about the *No Child Left Behind Act* are currently as divided as Berlin before the wall came down. But whatever one thinks about the 5-year-old federal law, it's clear that developing more-skillful teaching is a sine qua non for attaining higher and more equitable achievement for students in the United States. Without teachers who have sophisticated skills for teaching challenging content to diverse learners, there is no way that children from all racial and ethnic, language,

and socioeconomic backgrounds will reach the high academic standards envisioned by the law. For this reason, one of the most important aspects of the No Child Left Behind legislation is its demand for a 'highly qualified' teacher for every child. (Darling-Hammond, 2007, p. 1)

Educators need to get past this resistance and examine these mandates for ways they can be used to support the changes needed for students' sakes.

Resistance for the sake of resistance is no better than change for the sake of change. Educators need to re-focus on what is best for students and use the research available to plan for effective, long-lasting reform. Sparks and Hirsh (2000) wrote about an increasing body of research supporting the idea that in order to improve student performance teacher knowledge and teaching skills must first be improved.

Most plans for education reform have concentrated on changing school systems or their structures and have ignored the need for groups and individuals within the systems to change as well. Effective plans for change should consider not only the systems being targeted, but the individuals and groups who make up the system and will be responsible for making sure change takes place at all levels. Mandating high standards and tough tests alone will not improve schools. Teachers need to be given the support, tools, and training they need to help them improve their classroom practices (Sparks & Hirsh, 2000).

Two major factors affecting change are individuals' attitudes towards change and their capacity for flexibility. Collins (2001) wrote, "Whether someone is the 'right person' has more to do with character traits and innate capabilities than with specific knowledge, background, or skills" (p. 64). Understanding these factors can help facilitate

effective plans of improvement in education.

Teacher attitudes towards change are a key influence in implementing successful change. Dewey (1933) stated:

Because of the importance of attitudes, ability to train thought is not achieved merely by knowledge of the best forms of thought. Moreover, there are no set exercises in correct thinking whose repeated performance will cause one to be a good thinker... Knowledge of the methods alone will not suffice; there must be the desire, the will to employ them. This desire is an affair of personal disposition.

(pp. 29-30)

Teachers with positive attitudes towards change are more likely to help systems implement the necessary steps to bring about improvement. Teachers who are flexible may have a higher level of responsiveness to change. They may have less resistance to reform plans because they are able to adapt to changing situations. Teachers with positive attitudes and flexibility will facilitate change, not resist it.

There are many reasons why people, including educators, resist change. Not seeing a need for change, fear of change, a need to be in control, and being creatures of habit are some of the reasons. Evans (1996) describes four ways that change impacts people:

1. Change as loss - "Significant change almost always means loss and causes a kind of bereavement" (p. 28).
2. Change challenges competence - "Change immediately threatens people's sense of competence, frustrating their wish to feel effective and valuable" (p. 32).

3. Change creates confusion - "Whatever improvements change may promise, it almost always increases confusion and unpredictability" (p. 34).
4. Change causes conflict - "Change almost always generate friction, both between
5. individuals and between groups, because it invariably produces winners and losers, especially at first" (p. 35).

The cultural norms of schools also lead to resistance. These ways influence how an individual teaches and how he or she responds to suggestions for change, even when individuals do not realize they have adopted them. Deal and Peterson (1999) wrote,

Beliefs are powerful in schools because they represent the core understandings about student capacity (immutable or alterable), teacher responsibility for learning (little or a lot), expert sources of teacher knowledge (experience, research, or intuition), and educational success (will never happen or is achievable). (p. 27)

School culture can be an inhibiting factor in bringing about change and school improvement. Culture is a very powerful influence that is difficult to define and hard to identify (Peterson & Deal, 1998). Recognizing and understanding culture as a possible barrier to change can help educators develop better plans for change that include ways to overcome resistance to change. Sarason (1996) wrote,

Many more statements and questions could be formulated and asked concerning what the nature of life in a school should be, but they would only underscore two facts: life for everyone in a school is determined by ideas and values, and if these are not under constant discussion and surveillance, the comforts of ritual replace the conflict and excitement involved in growing and changing. (p. 177)

Administrators have a role in overcoming resistance to change. One of the key responsibilities of administrators is to serve as role models and be open to change personally. They should be active participants in any plans to improve education in their school system. Lambert (2002) described today's effective principal as someone who builds a shared vision with school stakeholders, focuses on student learning, and many other things in order to serve as a collaborative instructional leader. Administrators also need to understand the factors that influence change and be willing to address any forms of resistance that may exist in their schools. Glickman (2002) wrote,

Any school leader planning to implement major school reforms will meet with confusion, skepticism, or outright hostility from some parents and staff members. Open discussions and dissenting opinions are all part of forging a school agreement, but once a decision is made, the leader must be prepared to deal with challenges from those who continue to resist or refuse to participate. If the school has begun by laying a solid foundation of common beliefs, leaders have the moral authority to support the school's vision of education. (p. 3)

Administrators who create an environment that fosters positive change and encourages staff members to be active participants in planning and implementing school improvements may be more successful in implementing change. Bolman and Deal (1999) wrote about managers trying to bring about major changes by reformatting formal structures and then finding out that people are unwilling or unable to carry out the new tasks expected of them. Administrators need to provide the tools, training, and time their staff needs to make effective change. They also need to find ways to communicate

effectively so that clear goals and expectations fuel positive change instead of resistance.

Wheatley and Kellner-Rogers (1998) wrote,

We strongly believe that failures at organizational change are the result of some very deep misunderstandings of who people are and what's going on inside organizations. If we can clear up these misunderstandings, effectiveness and hope can return to our experience. Successful organizational change is possible if we look at our organizational experience with new eyes. (p. 1)

Administrators should seek input and involve staff members in the planning stages of change, not just the implementation of plans for reform. Sarason (1996) believed that even though the evidence supported the fact that principals are the gatekeepers of change efforts, the outcomes of these efforts are dependent on when teachers become part of the plan to bring about change. Administrators should become facilitators of change, not dictators, if effective, lasting changes are to be made in education. As Reeves (2006) stated,

While great leaders can make change invigorating, exciting, and motivating, and exceptional leaders can provide a continuous stream of feedback that will help communicate the benefits of change, even the best leaders cannot eliminate the inconvenience, opposition, risks associated with change. (p. 99)

When examining change it is important to remember that individuals and groups all respond in different ways, depending on the reform plan being presented. Shroyer (1990) identified two components of understanding the change process: understanding the meaning of change and analyzing the change being tried.

Following an examination of how school systems change and how groups within a system respond to change, the next step is to look at how individuals approach change. Research has indicated that a correlation exists between where an individual is on Maslow's hierarchy and how he or she responds to change efforts (Joyce & McKibbin, 1980). Using this information and other available research may help in overcoming educators' resistance to change.

As society changes, the needs of students also change. Darling-Hammond (1998) wrote,

Today's schools face enormous challenges. In response to an increasingly complex society and a rapidly changing, technology-based economy, schools are being asked to educate the most diverse student body in our history to higher academic standards than ever before. (p. 7)

Students' needs should provide the most important justification for reform in education. Glickman et al. (2001) wrote,

Collegial schools establish learning goals for all students consistent with the responsibility of education in a democratic society. These schools are always studying teaching and learning, setting common priorities, making decisions about internal changes and resource allocations, and assessing effects on student learning. (p. 6)

Regardless of what current mandates require of education, focus should always center on providing the best education possible for students so they can be successful in life. As Doyle stated in *The Superintendent of the Future*, "that is what schools should be about, that is what school leadership should be about, Academics first, academics last.

Everything else should contribute to the school's academic mission" (as cited in Spillane & Regnier, 1998, p. 16).

Educators need to maintain a sharp focus on academic goals, and work to make change truly effective so that students are provided with the skills they need in today's world. Tomlinson and McTighe (2006) found two characteristics that distinguish professionals in any field: acting on the most current knowledge in their field: being client centered and willing to adapt to meet the needs of individuals. Educators who are flexible and open to change will be more likely to utilize new strategies and techniques that will provide students with the educational opportunities that will help them raise their academic achievement level.

Effective change should be based on research and what the data show about how people respond to reform efforts. MacKenzie (1983) wrote, "Research shows that those schools that link their instruction and classroom management with professional development, direct assistance to teachers, curriculum development, group development, and action research under a common purpose *achieve their objectives*" (p. 6). Educators should be educated about this research so that they can examine their personal attitudes towards change and be able to use this knowledge to stimulate professional growth.

Administrators must utilize the research in facilitating change at the individual, group, and system levels. Reeves (2006) wrote about the need for leaders to confront the mythology surrounding educational change.

Effective schools research should be linked with what has been learned about change in order to bring about changes that have positive impacts on schools and improve student achievement. Reeves (2006), listed two primary conclusions based on his

research on what affects student achievement: 1) Leadership, teaching, and adult actions matter; 2) There are particular leadership actions that show demonstrable links to improved student achievement and educational equity. (p. xxiii)

Sarason (1996) asked whether students can continue to learn and change if teachers are not doing the same thing. Effective educators are life-long learners who continue to search for ways to reach all students. Tomlinson and McTighe (2006) wrote,

Nonetheless, a teacher in an effectively differentiated classroom will not allow economics, gender, race, past achievement, lack of parental involvement, or any other factor to become an excuse for shoddy work or outcomes that are less than a student is able to accomplish. (p. 44)

It is necessary to maintain focus on what is truly important in education, students.

Deal and Peterson (1999) stated, "In education, the risk of not doing things right is even higher. A poor-quality product or service can be recycled, but a young person who does not learn or who drops out is hard to salvage-a lost treasure" (p. 11). Educators should be willing to change how they teach in order to meet the needs of students and maintain a high level of effectiveness. Understanding the change process and how they personally approach change could help them do that more successfully.

CHAPTER III

METHODOLOGY

This chapter describes the methodology used to conduct this study. Included are the purpose of the study, research questions, population, survey instrument, data collection, data analysis, and a summary.

Purpose of the Study

The purpose of this study was to research the flexibility of educators and how they approach change. It was designed to determine the flexibility score of individual educators as well as their preferred change style. It was also designed to look for differences in these factors when analyzed for level of certification, gender, length of teaching career, subject area taught, and size of school in which the educator was working. Another area of focus was to look for differences in the flexibility scores and preferred change styles of teachers working in schools making AYP and schools not making AYP.

These differences could be used to plan effective reform efforts and professional development in order to have a positive impact on student achievement. They could also be useful in helping educators understand their own change styles and enhance their ability to make reform efforts successful on a personal level. A quantitative research design was used for this study.

This project was reviewed by the Human Subjects Protection Review Committee at the University of Southern Mississippi. The approval of the Institutional Review Board for this study can be found as Appendix A.

Research Questions

This study was designed to answer these questions:

1. What are the Change Styles (preferred approaches to change) and flexibility scores of certified K-12 teachers working in public schools in a Northern Plains state and are there differences in these when compared for level of certification, gender, length of teaching career, subject area taught, and size of school in which the educator was working?
2. Is there a difference in the Change Styles (preferred approaches to change) and flexibility scores between teachers working in public schools located in a Northern Plains state which made AYP for the 2006-2007 school year and those schools which did not make AYP for that year?

Population

The population used for this study included all certified K-12 teachers working in the public school systems in a state located in the Northern Plains. Statistics from 2005-2006 showed the number of certified teachers (classroom, Title I, Special Ed., Library, Guidance Counselor) working in public schools in this state to be 11,450.

The teacher certification classifications for this state include:

- Class 2 Standard Teacher's License (requires bachelor's degree in education, covers both elementary and secondary fields)
- Class 1 Professional Teacher's License (requires Class 2 License along with Master's degree or 30 graduate semester credits beyond the bachelor's in professional education or endorsable teaching area)
- Class 3 Administrative License (requires master's degree in school administration)

- or equivalent, principals must also have three years successful experience as a
- teacher at the appropriate level)
- Class 4 Career and Vocational/Technical Education License (allows for the use of work experience or apprenticeship training in certain areas to be used for certification purposes)
- Class 5 Alternative License (requires a bachelor's degree and a plan of professional intent leading to Class 1, 2, 3. or 6 license within three years)
- Class 6 Specialist License (only available to educators with school psychologist or school counselor endorsements)
- Class 7 American Indian Language and Culture Specialist (requirements for this class are set by each tribe, person with this class license may only be assigned to specialist services in American Indian language and culture) (XX Office of Public Instruction, 2007)

From this population a sample of eight school districts were identified to actually receive the surveys. Two districts were chosen at each level of size classification: AA; A; B; and C. One of the districts in each classification had made AYP for the 2006-2007 school year and the other had not. These districts were matched as closely as possible for size and socioeconomic status. Within each district, schools were chosen to provide a K-12 sample of teachers. A total of 23 schools were included in this sample.

Survey Instrument

The instrument used for this study was the *Change-Friendly Quotient Survey* developed by Wonder and Donovan and published in their book *The Flexibility Factor* in 1989. Permission to use this survey was granted to the researcher by Jacquelyn Wonder

via phone and e-mail, with the understanding that credit would be given to Wonder and Donovan and the results of the study shared with Ms. Wonder. The e-mails granting permission are included as Appendix B.

The *Change-Friendly Quotient Survey* contains three sections with a total of 27 questions, but only the first section consisting of 13 questions was used for this study. The instrument also included a questionnaire designed to identify the demographic information necessary to analyze for the respondents' level of certification, gender, length of teaching career, subject area taught, size of school the educator was working in, and AYP status of the schools for the 2006-2007 school year. The entire instrument is found in Appendix C. A cover letter explaining this study was sent out with the surveys and can be found in Appendix D.

The *Change-Friendly Quotient Survey* was developed and refined over a 4-year period by Wonder and Donovan as part of their research on how individuals respond to and initiate change. In 1984, they administered their instrument consisting of Part 1 to 680 health-care professionals, and the feedback from these respondents was used to revise the instrument. In 1986, another test was conducted on the instrument with 280 workshop participants and clients. The authors continued their research and used their findings and the results of their tests to continue revisions until they developed the final version in 1988. This version had two additional parts, home and work checklists. Prior to the publication of *The Flexibility Factor* in 1989, the survey in its present form was administered to approximately 1000 workshop participants. Thirty professionals in the fields of mental health, health care, education, and business also took the survey and believed it to be a viable, useful method of determining an individuals' flexibility in

dealing with change. The reliability and validity of the instrument, the *Change-Friendly Quotient Survey* developed by Wonder and Donovan (1989) is still being studied.

This study used Part 1 of the *Change-Friendly Quotient Survey* to collect data on teachers' flexibility and change styles. This section of the survey consists of 13 questions and results in a flexibility score based on the number of points out of a total of 104, as well as assignment to a change style category. It is composed of questions that explore attitudes toward various kinds of change by offering four answers based on the different change styles. The respondent checks all answers he or she believes represent responses the respondent would choose to situations and also identifies the response that would be his or her first choice for each situation. The total number of answers checked is double to determine the flexibility score. The higher the score (0-104/104) the more flexible a respondent is considered to be. The number of first choices in each category determines the respondents preferred change styles with the four possible categories being: Risker, Relater, Refocuser, and Reasoner.

Riskers, according to the survey designers, are individuals who are decisive about change. They are risk-takers either mentally or physically, sometimes both. They are usually extroverts who are action-oriented and may be impatient with gathering information about a proposed change. Riskers usually handle change easily, but their impatience may cause them to make big mistakes.

Relaters, according to the survey designers, relate well to people and will seek out the opinions of others when gathering information on change. They adjust their attitudes to those of others and are able to influence others because of their sensitivity. They consult with a variety of other people, which is an effective strategy unless they get too

much conflicting information that causes confusion. Relaters sometimes have trouble moving from the information gathering stage to actually implementing change.

Re-Focusers, according to the survey designers, are goal-oriented and have strong views about change. However, they are willing to revise the way they do things in response to a problem. They are practical and focused and when interrupted are able to refocus quickly. They sometimes may overlook pertinent details or problems.

Reasoners, according to the survey designers, are analytical and approach change thoughtfully. Their attitudes are based on past experience and careful research. They spend time and energy thoroughly researching change so they understand all facets involved. They are skilled with change requiring organization and use tools like inventories and flowcharts. Reasoners may have a tendency to over-plan which may irritate others.

All four categories have positive and negative aspects. All four also offer acceptable strategies for approaching change, but being able to use more than one of these styles is the goal individuals should aim for. Wonder and Donovan (1989) said this about Part 1 that

Four different reactions are offered for each situation. All of them are valid, normal and effective ways of managing change. Therefore, checking all four alternatives indicates that you are very flexible in the type of situation described and have many options in dealing with that kind of change. (p. 20)

Using the *Change-Friendly Quotient Survey* to identify teachers' level of flexibility and styles of change could help administrators work with staff members when planning for

change. It could also help individuals learn to approach change in a variety of ways and work with others who approach change using a different style.

Kisner (1993) used the *Change-Friendly Quotient Survey* to study the flexibility and preferred change styles of vocational administrators and teachers in Pennsylvania. This researcher explored the content and construct validity as well as the internal reliability of the instrument prior to using it in her study because there was no formal documentation for these factors.

Kisner (1993) chose to use a concurrent validity technique that required the administration of the *Change-Friendly Quotient Survey* and an accepted instrument to test groups and a comparison of the results. The California Psychological Inventory (CPI) was used because it had a sub-scale called Flexibility. Analyzing and correlating the responses to these two instruments resulted in a correlation coefficient of .34. The significance of this coefficient was $p=.0072$. A significant, low, positive, linear correlation between the CPI and the total flexibility score on the *Change-Friendly Quotient Survey* was demonstrated.

Some researchers found the *Change-Friendly Quotient Survey* to be reliable (test-retest) at a .4-.6 level, but no formal documentation of this was available. Therefore, Kisner administered the survey to 97 educators who were not part of the sample for the study in order to establish reliability. An analysis using SPSS found an internal reliability coefficient of .74, demonstrating a moderate to high level of internal consistency.

Glantz (1998) also used Part 1 of the *Change-Friendly Quotient Survey* as the instrument in a study of school restructuring matters and teacher attitudes toward change. Both Glantz (1998) and Kisner (1993) used comparisons of the categories developed by

Wonder and Donovan with the individual style differences developed by other researchers including Kolb (1985), Kirton (1994), and Myers (1990) in their studies. These comparisons showed similarities between all of these classifications.

Data Collection

The potential survey pool for this study included all certified K-12 teachers working in public school systems in a state located in the Northern Plains. Using data from this state's Office of Public Instruction, a list of school districts making AYP in the 2006-2007 school and those not making AYP for the same period was accessed. Districts were identified that had a K-12 rating in those areas. Schools on those lists were then compared for size and socioeconomic status of the communities they serve. Schools not making AYP were matched according to these factors with schools making AYP.

Initial contact for the study was made by telephone to superintendents of the districts selected. Follow-up e-mails were sent if the superintendents were unavailable by phone. This first contact explained the purpose of the study and asked permission to contact principals to see if they would be willing to allow their schools to be part of the survey pool. Once contact had been established with superintendents and permission was obtained to use schools in their district as part of the study, principals were contacted by telephone and e-mail. E-mail was used when multiple attempts to make contact by telephone were unsuccessful. The first contact with principals explained the purpose of the study, gave information about the survey instrument, and asked if the principals would be willing to distribute the survey to their teachers, gather completed surveys, and return them to the researcher. Many administrators chose to have information sent to them via e-mail rather than have hard copies sent through regular mail.

The next contact was made via mail or e-mail, according to the choice of the principal, and included a letter repeating an explanation of the study and a copy of the instrument to be reproduced and distributed to teachers. It also gave a timeline for returning completed surveys. The instrument included a demographic section with questions on gender, age, number of years teaching, current teaching assignment, level and area of certification, class of school teaching in, and AYP status of their school for the 2006-2007 school year. It also included Part 1 of the *Change-Friendly Quotient Survey*, as well as instructions for completing and returning the survey.

An e-mail was sent one week prior to the deadline for returning surveys asking administrators to remind their teachers about the survey and thanking them for their assistance. A final e-mail was sent to administrators after surveys were returned to thank them for their support and to give a timeline for receiving more information on the survey and results. Once the research was completed another mailing was sent to explain the survey and give information about the flexibility scores and the change styles to be shared with the teachers who completed the survey.

The goal was to have a minimum of 100 returned surveys. Surveys were sent to schools representing a stratified sample in order to make sure all four sizes (classes) of schools in the state where the study was conducted were represented. The four school classifications are: Class AA- 900+ students; Class A 370-899 students; Class B 130-369 students; and Class C 1-129 students. (XX High School Association, 2007). Even though the classifications are based on high school sizes, the other schools at all grade levels in those districts are also considered to be members of the same class. This was done in order to have data representing teachers in all sizes of schools.

Data Analysis

A total of 125 surveys out of a possible 900 were returned, for a return rate of approximately 14%. Of these, 112 were complete, while 13 were missing some information. Three of the completed surveys were completed by non-educators, (i.e. school nurse) and were not used in the results. One hundred twenty-two of the surveys were included in the data analysis.

Once the surveys were completed and returned, they were coded and entered into a statistical software program. The data were then analyzed to determine the answers to the research questions posed. The data were analyzed using *t* tests, one-way analysis of variance, and chi square.

CHAPTER IV

DATA ANALYSIS

This chapter reports on the data collected from a survey instrument completed by certified K-12 teachers working in the public school systems in a state located in the Northern Plains. The purpose of this study was to research the flexibility of educators and how they approach change. It was designed to determine the preferred change style of individual educators as well as their flexibility score.

This study used Part 1 of the *Change-Friendly Quotient Survey*, consisting of 13 questions, and resulting in a preferred change style and flexibility score for each respondent. This survey was developed by Wonder and Donovan (1989) and published in the book *The Flexibility Factor*. Each respondent was assigned two scores based on their answers to this survey--a preferred change style category and a flexibility score. These scores were then analyzed to see if there were differences based on level of certification, gender, years of experience, subject area, and size of school the respondent was working in. The scores were also analyzed to determine if there were differences in the scores of teachers working in schools that made AYP and those that worked in schools that did not make AYP. These comparisons were made using chi-squares, ANOVAs, and *t* tests.

The preferred change style identifies the approach individuals choose first when faced with change and the type of information they prefer to have when making decisions about change. There are four possible change styles: risker, relater, refocuser, and reasoner, with each having strengths and weaknesses. Table 1 illustrates where each of these styles is on the left/right brained continuum along with some of the characteristics of each style.

Table 1

Change style categories and descriptions

Left Brained		Right Brained	
Reasoner	Refocuser	Relater	Risker
Analytical	Goal-oriented	Relate well to people	Risk taker
Does a lot of research	Practical, focused	Seek out opinions	Leader
Skillful organizer	Effective under Pressure	Influences others	Extrovert
Tends to overplan	May overlook details	Conflicting views may confuse	Impatient gathering details

The higher flexibility score an individual has the more open he or she is to change, and the more likely he or she is to use more than one approach to change. The flexibility scores could range from 0-104 with a lower score indicating the least flexibility and dependence on one change style, and a higher score indicating more flexibility and a willingness to approach change more than one way. The ranges for the flexibility means and their descriptions are as follows:

- 0-26 Low flexibility, Respondents in this range choose to deal with change in only one way.
- 27-52 Low to Moderate flexibility, Respondents in this range choose to deal with change in up to two ways.
- 53-78 Moderate to Medium High, Respondents in this range choose to deal with change in up to three ways.
- 79-104 High, Respondents in this range choose to deal with change in a variety of ways.

The study was also designed to look for differences in preferred change style and flexibility scores when analyzed for level of certification, gender, length of teaching career, subject area taught, and size of school in which the educator was working at the time the survey was completed. Another area of focus were differences in the flexibility scores and preferred change styles of teachers working in schools making AYP and schools not making AYP.

Demographic and Frequency Information

Surveys were sent to approximately 900 teachers, and 125 surveys were returned, for a return rate of approximately 14%. Only 122 surveys contained complete information that was used in the data analysis. This exceeded the goal of 100 set for returned surveys.

A number of certification areas and levels were identified by the respondents. The largest group was teachers with K-8 certification (48 or 39.3%). This level of certification allows teachers in the state where this study was done to teach all subjects at the elementary level, grades K-8, including middle school and junior high settings. The next largest group, teachers with K-12 certification, totaled 30, and made up 24.6% of the sample. Respondents who listed more than one certification level are shown with a plus following the certification level that matched the current teaching assignment listed. Three respondents were in each the P-12 and P-12/Plus groups, each accounting for 2% of the total. One respondent, 1%, listed no certification level. This information is illustrated in Table 2.

Table 2

Frequencies and percentages of certification levels

Variable	Frequency	Percentage
Certification levels		
5--12	11	9
7--12	8	7
K--12	31	25
K--12/plus	8	7
K--8	48	39
K--8/plus	9	7
P-12	3	2
P-12/plus	3	2
No response	1	1

Of the 122 surveys, 91 were completed by females, 27 by males, and 4 did not have gender identification. This is illustrated in Table 3.

Table 3

Frequencies and percentages of gender

Variable	Frequency	Percentage
Gender		
Female	91	74.6
Male	27	22.1
No response	4	3.3

Four of the 122 usable surveys did not include years of teaching experience. There were 16 respondents with 0-5 years of experience, 28 respondents with 6-10 years of experience, 24 with 11-15 years of experience, 14 with 16-20 years of experience, 10 with 21-25 years of experience, 17 with 26-30 years of experience, and 9 with 31-35 years of experience. This is illustrated in Table 4.

Table 4

Frequencies and percentages of experience

Variable	Frequency	Percentage
Experience		
0-5 years	16	13.1
6-10 years	28	23
11-15 years	24	19.7
16-20 years	14	11.5
21-25 years	10	8.2
26-30 years	17	13.9
31-35 years	9	7.4
No response	4	3.3

The subject areas currently being taught were also varied with no group larger than eight teachers in one subject area. Some teachers listed more than one certification subject area. In these cases, the subject area that corresponded to the current assignment identified by the respondents was treated as their subject area. Some teachers also listed certification subject areas that do not exist in the state where the study was conducted. To make this information more usable, the responses were combined into subject categories. This information is illustrated in Table 5.

Table 5

Frequencies and percentages of subject areas of certification

Variable	Frequency	Percentage
Subject areas of certification		
Elementary	43	35.2
Language Arts	17	13.9
Arts	10	8.2
Math/Science	11	9
Counseling	6	4.9
SPED	9	7.4
No response	26	21.3

In the area of school size, there were 45 teachers working in AA schools, 30 in A schools, 36 in B schools, and 11 in C schools (smallest). This is illustrated in Table 6.

Table 6

Frequencies and percentages of school size

Variable	Frequency	Percentage
School size		
AA	45	36.9
A	30	24.6
B	36	29.5
C	11	9

Eighty respondents worked in schools that did not make AYP during the 2006-2007 school year while 42 worked in schools that did not make AYP that same year. This

is illustrated in Table 7.

Table 7

Frequencies and percentages of schools making/not making AYP

Variable	Frequency	Percentage
Making/Not making AYP		
Not Making AYP	80	65.6
Making AYP	42	34.4

Research Questions

1. What are the Change Styles (preferred approaches to change) and flexibility scores of certified K-12 teachers working in public schools in a school located in the Northern Plains and are there differences in these when compared for level of certification, gender, length of teaching career, subject area taught, and size of school in which the educator was working?
2. Is there a difference in the Change Styles (preferred approaches to change) and flexibility scores between teachers working in public schools in a state located in the Northern Plains which made AYP for the 2006-2007 school year and those schools which did not make AYP for that year?

Certification

In the area of certification level, a Pearson Chi-Square test was conducted with $df=12$ resulting in a value of 16.33 and $p=.176$, showing no significant relationship between the four change categories and certification level. This information is illustrated in Table 8.

Table 8

Certification level change categories

	Riskier	Relater	Refocuser	Reasoner
Grades 5-12	0	2	6	2
Grades 7-12	1	1	2	3
Grades K-12	8	7	18	4
Grades K-8	3	18	24	7
Grades P-12	1	2	6	0

A one way analysis of variance was conducted to look for differences in the flexibility scores between the certification groups. Flexibility score means for all groups except grades P-12 were in the low to moderate range. The mean score for grades P-12 was 54.44, which was in the moderate to medium range. The results of the ANOVA showed no significant relationship between flexibility scores and certification level, $F(4,116) = .584, p = .675$. The ANOVA information is illustrated in Table 9.

Table 9

Certification level flexibility score

	N	Mean	Sig.
Grades 5-12	11	49.27	22.47
Grades 7-12	7	40	17.82
Grades K-12	39	46.77	17.52
Grades L-8	55	48.73	20.96
Grades P-12	9	54.44	26.62

Gender

In the area of gender, a Pearson Chi-Square test found no significant relationship between the four change categories and gender, with $df=3$, $p=.521$, and value of 2.26.

This information is illustrated in Table 10.

Table 10

<i>Gender change categories</i>				
	Riskier	Relater	Refocuser	Reasoner
Male	5	6	11	3
Female	8	22	44	13

A t test was used to compare the means of flexibility scores and found no significant relationship between flexibility and gender, with $t=1.62$, $df=116$, and $p=.109$.

Both the male and female mean flexibility scores were in the low to moderate range. This is illustrated in Table 11.

Table 11

<i>Gender flexibility</i>			
	N	Mean	SD
male	27	42.74	21.32
female	91	49.74	19.26

Experience

A Pearson Chi-square showed a significant relationship between the four change categories and experience, with $df=18$, value=29.37, and $p=.044$. Eight of nine teachers, or 89%, with 31-35 years of experience, chose refocuser as their preferred change style. Fifty-three percent of teachers with 26-30 years of experience chose the refocuser as their

preferred change style. Fifty percent of teachers with 0-5, 11-15, and 21-25 years of experience chose refocuser as their preferred change style. Teachers with 6-10 years of experience were the largest group with 28 respondents in this range. Thirty-nine percent of the teachers in this group chose refocuser as their preferred change style. One group, teachers with 16-20 years of experience, chose reasoner as their most preferred change style. This is illustrated in Table 12.

Table 12

Experience change categories

	Riskier	Relater	Refocuser	Reasoner
0-5 years	4	4	8	0
6-10 years	3	9	11	5
11-15 years	2	5	11	4
16-20 years	0	3	3	6
21-25 years	1	3	5	1
26-30 years	3	4	8	0
31-35 years	0	1	8	0

A one way analysis of variance was conducted to look for differences in the flexibility scores between the experience groups. The mean flexibility scores of teachers with 11-15 years of experience (53.33) and 21-25 years (59.60) of experience were in the moderate to medium high range. The mean flexibility score for all other experience groups were in the low to moderate range. The results of the ANOVA showed no significant relationship between flexibility scores and experience, with $F(6,116) = 1.72$ and $p = .123$. This is illustrated in Table 13.

Table 13

Experience flexibility

	N	Mean	Std. Dev.
0-5 years	16	46.38	20.33
6-10 years	28	48	15.24
11-15 years	24	53.33	22.21
16-20 years	14	42.86	17.48
21-25 years	10	59.6	22.01
26-30 years	17	38.82	20.17
31-35 years	9	50.44	21.11

Certification Subject Area

A Pearson Chi-square showed no significant relationship between change categories and certification subject area, with $df=15$, value=13.30, and $p=.579$. This is illustrated in Table 14.

Table 14

Subject area change categories

	Riskier	Relater	Refocuser	Reasoner
Elementary	4	16	19	4
Language Arts	1	3	9	4
Arts	1	4	3	2
Math Science	1	1	6	3
Counseling	1	1	4	0
SPED	2	2	5	0

A One-way Analysis of Variance was conducted to look for differences in the flexibility scores between the certification subject area groups. The results of the ANOVA showed no significant relationship between flexibility and certification subject area with $F(5,95) = .25$ and $p = .939$. The mean flexibility scores for all subject area groups were in the upper level of the low to moderate range. The mean flexibility score for the language arts group was at the top of this range. The mean flexibility score for the arts group was the lowest of the groups, but still in the upper level of the low to moderate range. This is illustrated in Table 15.

Table 15

Subject area flexibility scores

	N	Mean	Std. Dev.
Elementary	45	47.6	17.13
Lang. Arts	18	52.89	24.61
Arts	10	46.6	17.08
Math/Science	13	51.69	25.95
Counseling	6	49.67	15.56
SPED	9	49.56	21.49

School Size

A Pearson Chi-square showed no significant relationship between change style and school size, with $df=9$, value=11.84, and $p=.223$. Teachers in school sizes A, B, and C chose refocuser as their preferred change style. Sixty-four percent of teachers in school size AA, the largest, chose relater as their preferred change style. This is illustrated in Table 16.

Table 16

School size change categories

	Riskier	Relater	Refocuser	Reasoner
AA	6	16	12	6
A	3	7	15	5
B	3	6	21	4
C	1	1	8	1

A One-way Analysis of Variance was conducted to look for differences in the flexibility scores between the school size groups. The results of the ANOVA showed no significant relationship between flexibility and school size, with $F(3,117) = .33$ and $p = .806$. The flexibility score means for AA, A, and B size schools were all in the low to moderate range. The mean for C size schools (53.45) was in the moderate to medium high range. This is illustrated in Table 17.

Table 17

School size flexibility

	N	Mean	Std. Dev.
AA	45	46.93	20.56
A	30	48.4	18.68
B	35	47.54	18.96
C	11	53.45	23.7

Adequate Yearly Progress

A Pearson Chi-square showed no significant relationship between change style categories and AYP, with $df=3$, value=3.60, and $p=.308$. This is illustrated in Table 18.

Table 18

AYP change categories

	Riskier	Relater	Refocuser	Reasoner
Made AYP	6	13	16	4
Did not Make AYP	7	17	40	13

A t-test was used to compare the means of AYP flexibility scores and found no significant relationship between flexibility and AYP, with $t=1.66$, $df=120$, and $p=.100$.

The mean flexibility scores for both these groups were in the low to moderate range. This is illustrated in Table 19.

Table 19

AYP flexibility

	N	Mean	Std. Dev.
Made AYP	42	43.81	17.5
Didn't Make AYP	80	50.01	20.69

Summary

In four of the five certification levels, the highest percentage of teachers were identified as refocusers. Only teachers whose certification level was grades 7-12 had the highest number identified as reasoners.

Both genders reported the highest numbers in the refocuser category. For males, the smallest category was reasoner, while for females the smallest category was riskier.

Teachers in six of the seven experience ranges identified refocuser as their most preferred change style. Only teachers with 16-20 years identified reasoner as their

preferred change style. Eight of nine teachers with 31-35 years of experience, or almost 89%, chose refocuser as their preferred change style.

In the area of certification subject area the largest number of teachers were those teaching elementary. Respondents in five of the six areas chose refocuser as the preferred change style. Those in the arts category preferred the relater change style.

In the area of school size three of the four categories chose refocuser as their preferred change style. Teachers in the largest schools, AA, chose relater as their preferred change style.

Teachers in both schools that made AYP and schools that did not make AYP chose refocuser as their preferred change style, although those in schools which did not make AYP did so by a larger percentage.

The only significant relationship found in this study was between change style and experience. Eight of nine teachers with 31-35 years of experience, or almost 89%, chose refocuser as their preferred change style. Teachers in six of the seven experience ranges identified refocuser as their most preferred change style, but only the teachers with 31-35 years of experience chose this style by such a high percentage. Only teachers with 16-20 years of experience identified reasoner as their preferred change style.

Overall, 25.6% of respondents had flexibility scores in the low range, 30.6% in the low to moderate range, 39.7% in the moderate to medium high range, and only 4.1% in the high range. In all areas--certification, gender, experience, subject area, school size, and AYP--the most preferred change style was refocuser, followed by relater, reasoner and risker.

This chapter presented the data analysis of the change styles and flexibility scores

of the teachers who participated in this study. Chapter V discusses conclusions and implications based on the results of the data analysis.

CHAPTER V

SUMMARY AND CONCLUSIONS

Summary

“Strategic approaches to organizational change begin with these realities and complexities. They emphasize meaning before roles, culture before structure.

Implementation depends crucially on the meaning the change has to those who must implement it” (Evans, 1996, p. 17). One way to begin understanding what change means to the individuals who are expected to implement it in schools is to study how individuals approach change. Learning about change styles and flexibility scores may help teachers and administrators understand change from a personal perspective and make them more willing and able to implement change in their classrooms and schools that will positively affect student achievement.

This study focused on change, in particular, how teachers approach change. Specifically it focused on identifying two change related areas, preferred change style and flexibility score, of individual educators and then analyzing the results to address two research questions:

1. What are the Change Styles (preferred approaches to change) and flexibility scores of certified K-12 teachers working in public schools located in a Northern Plains state and are there differences in these when compared for level of certification, gender, length of teaching career, subject area taught, and size of school in which the educator was working?
2. Is there a difference in the Change Styles (preferred approaches to change) and flexibility scores between teachers working in public schools located in a

Northern Plains state which made AYP for the 2006-2007 school year and those schools which did not make AYP for that year?

The survey instrument used was Part 1 of the *Change-Friendly Quotient Survey* developed by Wonder and Donovan (1989). This same instrument, made up of 13 questions, was used by Glantz (1989) and Kisner (1993) in similar studies. The survey yields two types of results, a preferred change style and flexibility scores. There are four change styles: risker, relater, reasoner, and refocuser; each with strengths and weaknesses. The flexibility scores can range from 0-104 in these categories: 0-26 low; 27-52 low to moderate; 53-78 moderate to medium high; and 79-104 high. Scores in the low range indicate the use of no more than one of the change styles and the possibility of not using any, or a complete unwillingness to change. The next level indicates the possible willingness to use up to two of the change styles, the third up to three of the change styles, and the fourth indicates that some respondents are using all four change styles.

The population for this study was teachers working in K-12 public schools in a state located in the Northern Plains. A stratified sample was chosen by matching eight school districts as closely as possible for size and socioeconomic status, with four districts having made AYP in the 2006-2007 school year and four not having made AYP that same year. Twenty three schools from those districts were chosen to provide a similar sample of K-12 teachers from each district. Of approximately 900 potential respondents, 122 usable surveys were returned, for a 14% return rate. This low rate of return lessens the possibility of generalizing the results of this study, but there was one

significant finding in the area of experience, along with enough interesting trends to make further research worth considering.

Discussion

One-fourth of respondents, 25.6%, had flexibility scores in the low range, indicating they either avoid change or approach change in only one way. Just less than one-third, 30.6 %, of respondents had flexibility scores in the low to moderate range, indicating they approach change using no more than two styles of change. Another 39.7% had flexibility scores in the moderate to medium high range, indicating use of two or three change styles when approaching change. The smallest group of respondents, 4.1%, had flexibility scores in the high range, indicating use of three to four change styles when approaching change. Identifying their own flexibility scores would allow teachers and administrators to recognize whether they are open to change or not, and hopefully find ways to improve that capability.

In all areas—certification, gender, experience, subject area, school size, and AYP—the four change styles were from most preferred to least: refocuser, relater, reasoner, and risker. Kisner (1993) also identified refocuser as the most preferred change style in a study targeting vocational educators. Kisner's study found the change styles were preferred in this order from most to least: refocuser, risker, relater, and reasoner, differing from the order of preference of this study. Identifying their own preferred change styles or styles would help educators understand what type of information they need to be more comfortable with change. Administrators who know their teachers' preferred change style and flexibility levels would be able to identify the teachers most likely to support change as well as provide the type of information that would help all their teachers be more

comfortable with and supportive of proposed changes. Learning about the differences in the four change styles would also allow educators to recognize the way their colleagues approach change and realize that someone who uses a different preferred change style may need more or different information. What might be seen as resistance could be a lack of the proper information being provided. Administrators who understand that individuals approach change in different ways would be able to recognize that a teacher may have a different preferred change style without being resistant. Understanding what their flexibility score and preferred change style are, and what those mean, could also give educators the opportunity to explore using the other change styles to expand their options when approaching change. Once identified and understood, the different preferred change styles could help educators approach change in a united, more complete way.

Certification

In the area of certification level, all categories except grades 7-12 showed the largest number in the refocuser change style. The teachers with 7-12 certifications chose the reasoner category slightly more often than the other change styles. The teachers identifying themselves as having P-12 certification had the highest mean, 54.44, for flexibility scores. This would indicate a willingness to use two and sometimes three different change styles. Those with 7-12 certifications had the lowest mean of 40, indicating a heavy preference for one change style with occasional use of a second. This certification level is no longer used and would only be listed by teachers who have been certified in the state where this study was conducted for several years. This may indicate a tendency for teachers who have been certified for longer to be less flexible, which is supported by the results in the area of experience referenced later in this chapter.

Many of the educators responding to this study did not identify their certification level or certification subject area correctly, and some identified levels and areas that do not exist in the state where this study was conducted. This would indicate a lack of knowledge on the part of some educators about their certification, or possibly a lack of understanding about certification in general. This is an area of concern as certification is required for continuing a profession in teaching and because this area is under a great deal of scrutiny because of the focus on highly qualified teachers. Some of the confusion may be the result of changes in certification levels over the last few years. For example, in 2002, many certifications that were classified as 7-12 were changed to 5-12. This allowed teachers with secondary school certifications to teach in middle school settings.

Gender

Both males and females chose refocuser as their preferred change style. Females' least popular change style was risker, while males chose reasoner as the least preferred change style. The second preferred change style for both was relater. In the area of flexibility, females had a higher mean, 49.74, compared to 42.74 for males, indicating that females may be slightly more flexible than males. Both of these scores indicate a low to moderate level of flexibility. A larger number of the respondents, 74.6%, were female, compared to 22.1 for males. Attempts to find data for public school educators in the state where the study was conducted as a whole for comparison were unsuccessful.

Experience

The only significant finding of this study was in the area of experience and change styles. In teachers with 16-20 years of experience, the reasoner change style was the category with the highest number. In all other levels of experience, the category with

the highest number was the refocuser. Teachers with 31-35 years of experience chose refocuser as their preferred change style 88.9% of the time, a significantly higher percentage than the other groups in this area.

In the area of experience, the means ranged from 38.82 for teachers with 26-30 years to 59.6 for teachers with 21-25 years of experience. A mean of 38.82 shows a preference for using one change style most of the time, while a mean of 59.6 indicates more flexibility and the willingness to approach change using three different change styles.

Subject Area

In the area of subject area being taught, five of the six groups (elementary, language arts, math/science, counseling, and SPED) listed refocuser as the preferred change style more than any other. Only arts (e.g., music and art) teachers listed relater as the preferred style, but there was a slim margin between the numbers for all four change styles in this group of respondents.

Means for flexibility scores in this area ranged from 46.6 for arts to 52.89 for language arts. Both of these scores fall within the moderate to medium high flexibility range, but would indicate that language arts teachers are more likely to be in the upper end of this flexibility range, or more likely to try different approaches to change.

School Size

School size had four categories, starting with AA, the largest schools, down to C, the smallest schools. Teachers in AA schools preferred the relater change style, with refocuser as the second most preferred category. Teachers in A, B, and C schools preferred the refocuser category.

School size flexibility score means ranged from 46.93 for AA schools to 53.45 for C schools. AA, A, and B mean scores were all in the low to moderate flexibility range. The mean score for C schools was in the moderate to medium high range. Teachers in small schools must often be willing to take on a variety of assignments and duties, possibly indicating a higher level of flexibility.

Adequate Yearly Progress

In the area of AYP, teachers in both schools making adequate yearly progress and those not making AYP, the preferred change style was refocuser. In those who made AYP the least preferred style was reasoner and in those not making AYP the least preferred style was risker.

In this same area flexibility mean scores were 43.81 for schools making AYP and 50.01 for schools not making AYP. Both of these scores are in the low to moderate range for flexibility.

Schools not making AYP in the state where this study was conducted are under a great deal of scrutiny and have attempted implementation of many different programs and strategies, most with limited success. Of the total number of respondents, 116, in this area, 39 were from schools which made AYP and 77 were from schools which did not make AYP. Since the schools were matched by size, the number of teachers in each should have been similar and the number of respondents would have been expected to be similar. This might indicate that teachers who work in schools that did not make AYP are more open to exploring new ideas, possibly as the result of being under pressure to raise student achievement levels. They may also be more conditioned to responding to surveys

as they are the target of more reform efforts and studies attempting to find out why the student in those schools are not succeeding.

Recommendations for Policy and Practice

Teachers could be made aware of the *Change-Friendly Quotient Survey* as a possible reflective tool that might increase their self-awareness and give them insight into the way they approach change. Understanding how they approach change may help them in seeking out the type of information they need to make implementing change more comfortable. It may also encourage them to explore using change styles other than their preferred one. Teachers may also choose to use this tool with students as one more way to assess how student learn best in order to adapt their teaching to produce the best educational results.

Administrators could use this same tool as a way to find out how their teachers approach change in order to provide the type of information that would make change more acceptable. They may also benefit from determining their own preferred change style(s). Doing so may help them recognize when someone is operating with a different preferred change style, rather than seeing them as someone who is resisting change.

Overall the most preferred change style of teachers was refocuser with relater the second most preferred. Administrators who target these types of people in the way they propose change (e. g., the type of information given) may be more successful in implementing effective change. Kisner (1993) also found her respondents to prefer the refocuser style, but the second preferred style in her study of vocational educators was risker.

There were a number of teachers who seemed unclear about their certification, either the level or subject area. Some respondents identified endorsements that do not exist as a part of certification in the state where this study was conducted. This may indicate a need for the state's Office of Public Instruction to put more effort into educating teachers about the certification requirements. Not only is certification necessary for teachers to continue their livelihood, but the emphasis on the need for teachers to be highly qualified means teachers need to be very clear about their qualifications.

Some respondents were also unsure of whether or not their school had made AYP. This would indicate that more needs to be done to inform teachers about the results of required testing and their school's status. Teachers who do not know the status of their school may not see the need for change that would result in raising student achievement.

Recommendations for Further Study

The small sample used for this study and the low return rate limit the possibility of generalizing of the results. Further study should be done using a larger sample. In addition, if this study was replicated there are some things that should be changed. The demographic section of the survey was too long and the instructions for the entire survey seemed difficult for respondents to understand, which could help account for the number of surveys returned with missing components. The number of possible answers, or the way the questions were worded, may have also caused confusion. For example, Current Teaching Assignment (Subject and Grades) had a blank for the answer which may have led to some confusion and missing information. A question on age was included, but was not used in the data analysis, so was unnecessary. These issues could possibly be

addressed by visiting the participating schools personally and being present when the surveys were administered. Personal visits might also increase the number of surveys being completed. That would increase the cost of conducting the study, but might be worth the effort if more surveys were returned and completed more accurately.

This survey was sent to schools in the spring and it was later discovered that many administrators did not distribute them to their staff until almost the end of the school year or not at all. The fall might be a better time to conduct a survey. There is an educators' conference during this time which might provide an opportunity to increase the number of respondents completing the survey.

It would be interesting to use this survey with teachers to identify their flexibility scores and preferred change styles and then follow up with training designed to help them increase their flexibility and willingness to use more than one change style. The book *The Flexibility Factor* (Wonder & Donovan, 1989) provides suggestions and activities that could be used for this type of training if the authors gave permission. This might be more beneficial than conducting another study looking for differences in a variety of areas. Identifying differences by gender or certification level is not enough to help educators make changes in how they approach change. They need to understand how they approach change as individuals and then have the opportunity to learn how to use other approaches in order to increase their capability to change.

In a study guide used in a presentation for the Alliance for Curriculum Enhancement in March 2008, Marzano and Pickering wrote,

A Professional Educator is a teacher, who...is a student of the research on learning...reflects on the effectiveness of their instruction...takes responsibility

for student learning...is enthusiastic about teaching today's kids... embraces and advances the 21st century vision for education...uses technology in personal and professional life...is literate and strategic about his/her practices...is a Thinking Teacher. (p. 3)

Learning about change is one more way for educators to be thinking teachers. Thinking teachers are those who will focus on the needs of their students and make changes in their teaching in response to those needs. Thinking administrators are those who will make teachers part of a team focused on providing the education that will give their students the skills and knowledge they need to be successful.

Student achievement depends on teacher quality, which depends on improved classroom instruction based on student needs, which depends on implementation of effective practices, which depends on training and professional development, which in turn depends on educators' willingness to change their practices and beliefs.

The single most important factor influencing student achievement is teacher quality. In order for teachers to be effective they must be well trained, have access to professional development based on research, and a willingness to change their classroom strategies in response to their students' needs. Teachers who have identified their preferred change style and flexibility score have some of the tools they need to make the changes needed to improve their teaching in ways that will result in increased student achievement.

Teachers today face the challenge of meeting the needs of a student population that is ever-changing. The best teachers continue to reflect and change in response to the needs of their students. Understanding change, including how they approach change and

their flexibility level, could help teachers make the right changes in their classroom practices. Changes that will lead to increased student achievement and success.

Appendix A

INSTITUTIONAL REVIEW BOARD APPROVAL



THE UNIVERSITY OF SOUTHERN MISSISSIPPI

Institutional Review Board

118 College Drive #5147
 Hattiesburg, MS 39406-0001
 Tel: 601.266.6820
 Fax: 601.266.5509
 www.usm.edu/irb

**HUMAN SUBJECTS PROTECTION REVIEW COMMITTEE
 NOTICE OF COMMITTEE ACTION**

The project has been reviewed by The University of Southern Mississippi Human Subjects Protection Review Committee in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
 - The risks to subjects are reasonable in relation to the anticipated benefits.
 - The selection of subjects is equitable.
 - Informed consent is adequate and appropriately documented.
 - Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
 - Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
 - Appropriate additional safeguards have been included to protect vulnerable subjects.
 - Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the "Adverse Effect Report Form".
 - If approved, the maximum period of approval is limited to twelve months.
- Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: 27091101

PROJECT TITLE: **Understanding the Change Styles of Teachers to Improve Student Achievement**

PROPOSED PROJECT DATES: 07/01/07 to 05/31/08

PROJECT TYPE: **Dissertation or Thesis**

PRINCIPAL INVESTIGATORS: **Arlene May Green Bigby**

COLLEGE/DIVISION: **College of Education & Psychology**

DEPARTMENT: **Educational Leadership & Research**

FUNDING AGENCY: **N/A**

HSPRC COMMITTEE ACTION: **Expedited Review Approval**

PERIOD OF APPROVAL: **03/17/08 to 03/16/09**

Lawrence A. Hosman
 Lawrence A. Hosman, Ph.D.
 HSPRC Chair

3-19-08
 Date

APPENDIX B

PERMISSION TO USE SURVEY (TWO E-MAILS WITH REPLIES)

Re: use of survey

Thursday, October 27, 2005 1:56 PM

From:**"Jacquelyn Wonder"** <jacquelynwonder@comcast.net>

View contact details

To:**"Arlene Bigby"** <abiteach@yahoo.com>

You are getting through--I have been in Turkey for a month and now am scrambling to get caught up before I leave to give a paper next week--It may be awhile before we talk more--glad you got the Kisner paper and good luck. Let me know how it goes-- we'll talk sometime! Jacquelyn

----- Original Message -----

From: Arlene Bigby**To:** Jacquelyn Wonder**Sent:** Saturday, October 08, 2005 10:21 AM**Subject:** use of survey

Jacquelyn, I hadn't heard from you after my first e-mail, so thought I should send another to make sure it is getting through. I so enjoyed visiting with you on the phone and look forward to staying in touch as I work on my dissertation. Thank you again for allowing me to use the Change-Friendly Quotient Survey as my instrument. I found the dissertation you referred to by Mary Kisner out of Penn State and have ordered it online. I am spending this weekend writing so I hope to get a lot of work done. I look forward to hearing from you soon. Thanks again, Arlene Bigby PO Box 554 Nashua, MT 59248 406-746-3456

Re: dissertation

Sunday, November 18, 2007 1:38 PM

From:**"Jacquelyn Wonder"** <jacquelynwonder@comcast.net>

View contact details

To:**"Arlene Bigby"** <abiteach@yahoo.com>

Oh Arlene, I just returned from a yoga workshop, opened my email and there is this fun message from you!.

When did we last speak? it seems to me I was in bad shape health wise--I had open-heart surgery for a disease I had as a child in 2004 and seem to recall I wasn't as helpful as I wished.

I am now in good shape computer and health wise. I'm looking forward to hearing more from you. Jacquelyn Wonder Ph.D.

----- Original Message -----

From: Arlene Bigby

To: Jacquelyn Wonder

Sent: Sunday, November 18, 2007 10:14 AM

Subject: dissertation

Ms. Wonder, I thought I would update you on my dissertation progress. I have received approval for my study from my committee and am waiting on final written approval from the University. I hope to be sending surveys out by January. This means I should have results to share with you by March. Members of my committee were very impressed with your Change Friendly Quotient Survey. Thanks again for allowing me to use it in my study. Sincerely, Arlene Bigby PS I have moved and this is my current contact information. PO Box 33 Broadview, MT 59015; 406-667-2298 (home); 406-667-2337 (work)

APPENDIX C

SURVEY INSTRUMENT

Please fill out the following demographic information and then complete *The Change-Friendly Quotient Survey* PART 1: YOU that follows. No individual will be identified by this information and all information will be kept completely confidential. Thank you for your participation in this research project.

Gender: Male _____ Female _____

Age: 20-29 _____ 30-39 _____ 40-49 _____ 50-59 _____ 60-69 _____
70 or older _____

Number of Years Teaching: 0-5 _____ 6-10 _____ 11-15 _____ 16-20 _____
21-25 _____ 25-30 _____ 31-35 _____ 36-40 _____ 41 or more _____

Current Teaching Assignment (Subject and Grades): _____

Level of Montana Teacher Certification: K-8 _____ 5-12 _____ K-12 _____
Other _____

Subject Area: _____

Class School Teaching In: Class C _____ Class B _____ Class A _____ Class AA _____

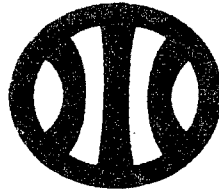
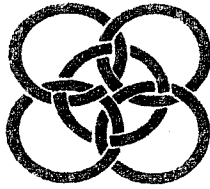
Did your school make Annual Yearly Progress (AYP) for the 2006-2007 school year?
Yes _____ No _____

The Change-Friendly Quotient Survey

PART 1: YOU

In the situations described below, four reactions or coping methods are given. Put yourself in each scene and check all those responses you would actually use, leaving blank the ones you would rarely or never use. Also write the number "1" by your favorite response.

1. If I were asked to choose the designs I find pleasing from those below, I would select:
 - a. _____ b. _____ c. _____ d. _____



2. If my company reduced our insurance benefits package, I would:
 - a. ____ talk to the benefits officer about it.
 - b. ____ discuss it with others to see if they feel as I do about it.
 - c. ____ seek additional insurance to compensate for lost benefits.
 - d. ____ wonder if my company is in financial trouble; review my career options.
3. If a friend/colleague canceled our luncheon at the last possible moment, I would:
 - a. ____ confront the person about his or her behavior.
 - b. ____ ask around to see if this person has canceled with others.
 - c. ____ think what to do with the free time and how it affects my schedule.
 - d. ____ assess whether there was a good reason for canceling.
4. If I were sent for training in a field totally new to me, I would:
 - a. ____ look forward to learning something entirely new.
 - b. ____ get information from others who've had the training.
 - c. ____ bone up on information that would help me with it.
 - d. ____ evaluate how useful it would be to me.
5. If I were transferred to another city, I would:
 - a. ____ picture myself living and working there.
 - b. ____ find out more about the place by talking to everyone.
 - c. ____ call a realtor to settle the housing issue.
 - d. ____ review the social, personal, and financial pros and cons.
6. If I were to notice one of my parents' health declining, I would:
 - a. ____ contact my parent's doctor for an opinion.
 - b. ____ talk it through with parents, relatives, and friends.
 - c. ____ read up on the illness and its symptoms.
 - d. ____ try to determine how serious it really is.
7. If an important relationship suddenly ended to my surprise, I would:
 - a. ____ become more active socially, plunge in to new interests; develop a new skill.
 - b. ____ join support group on breakups; talk to others who've "been there".
 - c. ____ transfer my energy to areas of my life that are going well.
 - d. ____ figure out what caused the breakup and, perhaps, consult an expert.
8. If my favorite newspaper columnist were dropped, I would:

- a. ☐ call the editor and ask for an explanation.
- b. ☐ read the replacement column and compare with my favorite.
- c. ☐ begin a letter-writing campaign to get the column reinstated.
- d. ☐ recall past columns to find reasons for the cancellation.

9. If a project I had devised were rejected, I would:

- a. ☐ protest and try to dissuade objectors.
- b. ☐ confer with others, then go "back to the drawing board".
- c. ☐ give it up if objections seem legitimate and move on.
- d. ☐ study the project design for possible flaws.

10. If a friend wore an inappropriate outfit, I would:

- a. ☐ smile and say "more power to you."
- b. ☐ ask others for their reactions to it.
- c. ☐ caution him or her about wearing it to work.
- d. ☐ worry about my friend but do nothing.

11. If I were delayed in traffic thirty minutes on my way to an important appointment, I would:

- a. ☐ try to find a shortcut or new route.
- b. ☐ rehearse explanations in my mind.
- c. ☐ try to find a phone to notify someone of my delay.
- d. ☐ assess how to turn the situation to my advantage.

12. If I were asked twenty minutes before a meeting to describe a project for which I'm responsible, I would:

- a. ☐ welcome the chance to make an impact; dream up a dramatic way to present it.
- b. ☐ ask others on my team for their input; conceptualize a brief overview.
- c. ☐ tune out everything going around me; outline the essential information.
- d. ☐ decline until I have time to prepare more fully.

13. If I were challenged when discussing a topic I know well, I would:

- a. ☐ relish the controversy if the challenger is witty and friendly.
- b. ☐ ask the challenger to say more about his or her views, then paraphrase to further clarify.
- c. ☐ compare our points of view and attempt to get consensus.
- d. ☐ review how I came to my conclusions; wonder if the challenger has more data.

☐ a

☐ b

☐ c

☐ d

To score, add the number of first choices you checked in a, b, c, and d and enter above.

Now, enter the grand total of all the responses you checked: _____.

What's in Part 1?

You have just completed the first section of a three-part survey that helps you determine your overall flexibility in managing change. This section is composed of questions that tease out your attitudes toward various kind of change.

As you review this first section, you can see that it includes everything from a measure of your taste in design to how you cope with minor and major changes in your routine.

Four different reactions are offered for each situation. All of them are valid, normal, and effective ways of managing change. Therefore, checking all four alternatives indicates that you are very flexible in the type of situation described and have many options in dealing with that kind of change.

For the purposes of this study, only Part 1 of the *Change-Friendly Quotient Survey* will be used. The entire survey can be found in *The Flexibility Factor* (1989) by Jacquelyn Wonder and Priscilla Donovan.

The researcher was granted permission to use this survey by the author Jacquelyn Wonder.

APPENDIX D

COVER LETTER FOR QUESTIONNAIRE

PO Box 33
Broadview, MT 59015
abiteach@yahoo.com
667-2298

April 3, 2008

Dear Colleague;

I am conducting a study of teacher flexibility and how teachers approach change. The intent of this study is to identify patterns and styles in the ways teachers respond to change. If you would like more information on this topic the source of this survey is found at the end of the document. If you are interested in knowing your style of change and flexibility score, please keep a copy of your completed survey and information will be sent to you that will explain your results.

The survey form will take just a few minutes to complete. This instrument measures attitude, so there are no right or wrong answers. Participation is strictly voluntary and results will be completely confidential. Return of the completed questionnaire constitutes informed consent. When you have finished the survey, please return it to the contact person in your school.

This project has been reviewed by the Human Subjects Protection Review Committee, which ensures that research projects involving human subjects follow federal regulations. Any questions of concerns about rights as a research participant should be directed to the Chair of the Institutional Review Board at 601-266-6820. Participants may withdraw from this study at any time without penalty, prejudice, or loss of benefits. Please feel free to contact me if you have any questions and thank you for your assistance.

Arlene Bigby
Doctoral Candidate
University of Southern Mississippi

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