Rating Intervention Strategies for Overcoming Impediments to Planned Change by Michigan Public School Administrators

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RATING INTERVENTION STRATEGIES FOR OVERCOMING IMPEDIMENTS TO PLANNED CHANGE BY MICHIGAN PUBLIC SCHOOL ADMINISTRATORS

by

Dale Kimball

A Dissertation Submitted to the Faculty of The Graduate College in partial fulfillment of the requirements for the Degree of Doctor of Education Department of Educational Leadership

Western Michigan University Kalamazoo, Michigan June 1993
In this study, Michigan public school principals reported their perceptions regarding differences in the degree to which nine intervention strategies helped to overcome 10 impediments to change that are often encountered by principals. The intervention strategies and impediments to change used in this study were chosen as a result of a content analysis of literature on change.

A two-part pilot study was conducted. In part one, principals were asked for comments regarding the effectiveness of the letter of introduction, clarity of instructions and questionnaire items, and ease and time of completion. In part two, information was gathered to determine whether the survey would be completed in a manner consistent with the instructions and what the expected response rate would be.

The population for this study, 3,094 principals from Michigan public schools, were potential participants for a survey used to gather the data. A proportional stratified sampling procedure was used to select a sample of 350 practicing public school administrators from elementary schools, middle schools, and high schools in Michigan. Two hundred thirty-four surveys were mailed to...
elementary school principals, 62 to middle school principals, and 53 to high school principals.

Low response rate (28%) was a source of concern for the interpretation of findings. Data were analyzed, and responses indicated there were few differences among the principal subgroups. The findings are reported but should be interpreted with caution.

Principals reported that four intervention strategies (nonthreatening atmosphere, inservice education, persuasion by opinion leaders, and decentralized authority) were generally effective strategies for overcoming the impediments to change. Principals reported that five intervention strategies (long- and short-term planning, new materials, research-based studies, parental pressure for or against a change, and legislative mandate) were generally less effective strategies for overcoming the impediments to change.
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Rating intervention strategies for overcoming impediments to planned change by Michigan public school administrators

Kimball, Dale, Ed.D.
Western Michigan University, 1993

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DEDICATION

I would like to dedicate this work to my wife, Judy, and my mother, Alice Clary. I offer this dedication to my wife, Judy, because of her constant encouragement, support, understanding, faith, and unwavering love. I offer this dedication to my mother, Alice Clary, because of her unconditional love and steadfast belief in me. Thank you! Because of you, I was able to complete this work.
ACKNOWLEDGEMENTS

I would like to express my sincere appreciation to my doctoral committee, including Dr. Uldis Smidchens, chairperson; Dr. Patrick Jenlink; and Dr. Stan Olson, for their guidance and support in seeing me through this project. I would like to offer special acknowledgement and thanks to Dr. Uldis Smidchens for his direction and counsel during the completion of this project.

I will always be grateful to my friend and mentor, Dr. Edgar Kelley, who suggested the topic for this dissertation, was chair of my committee before he became ill, and encouraged me to stretch myself, "Doctor."

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Dale Kimball
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CHAPTER I

INTRODUCTION

Premise

During the 1980s and early 1990s, kindergarten through 12th-grade schools in the United States were severely criticized for their failure to be competitive with the rest of the world in educating children. For example, schools were told that they needed to increase student time on task, provide career ladders for teachers, introduce computer study into the curriculum, increase parental involvement, improve personnel evaluation, tighten curriculum standards, and develop partnerships with business (Gorton, 1987). The educational community was criticized at the federal level in A Nation at Risk (National Commission on Excellence in Education, 1983) for not making the necessary changes to keep American students competitive in a global economy.

These pressures were also present at the state level throughout the United States as many state legislatures took action trying to legislate school reform. In Kansas and Missouri, there have been proposals to lengthen the school year ("Across the Nation," 1992). In Texas, a master teacher test has been initiated ("Across the Nation," 1992). In Iowa and Minnesota, open enrollment between school districts has been allowed since 1989 ("Across the Nation,"
1992), and in Michigan the state has passed Public Act 25, requiring that schools get involved in the school-improvement process ("Coalition Forms," 1990).

In the 1980s and the beginning of the 1990s, American public education has had its reputation tarnished. The remainder of the 1990s will be a time for education to try to repair the damage done to its reputation in the previous decade. Kindergarten through 12th-grade education will have to "retool," in a rapidly changing world, under the close scrutiny of politicians, business leaders, and taxpayers.

In the 1990s, kindergarten through 12th-grade education will have to undergo many changes. Whether these changes are encouraged by state mandates, as is the case in Michigan with Public Act 25 and in Minnesota and Iowa through school-choice options; by federal mandates; or initiated and implemented by educators seeking to better education, depends largely on the educational community's ability to overcome the "roadblocks" to planned change that the various educational groups (i.e., administrators, teachers, school board members, students, labor unions, communities, and parents) and the change process itself erect to impede attempts at planned change.

Avoiding, reducing the influence of, or eliminating impediments to planned change in the kindergarten through 12th-grade educational setting are keys for one who tries to implement planned change. To overcome impediments to planned change, one attempting to implement
the planned change must recognize common impediments to the process and the forms of intervention strategies that can be used to stimulate the problem-solving process of those expected to implement the change (Havelock & Havelock, 1973).

Much of the literature on planning for change has supported that change agents or change facilitators, those responsible for trying to change the educational organization, can better implement planned change if they follow certain intervention models or procedures (Chin, cited in Bennis, Benne, Chin, & Corey, 1961; Hall, Hord, Rutherford, & Huling-Austin, 1987; Havelock & Havelock, 1973). The change agents who will be successful at implementing planned change in the 1990s will be those who are aware of and able to use intervention strategies to overcome barriers and impediments to planned change that they will inevitably face.

Purpose of the Study

The purpose of this study was twofold. First, the relationship of the effectiveness of the intervention strategies to the three levels studied--elementary school principals, middle school principals, and high school principals--was examined. The researcher wanted to determine whether there were differences in the strategies elementary school, middle school, and high school principals found to be effective when attempting to nullify the impediments faced when trying to implement planned change. Second, the preferred intervention strategies used by kindergarten through
12th-grade principals, when combined into one group, were examined. The researcher was interested in how these principals ranked the effectiveness of the intervention strategies in reducing the influence of impediments to planned change. The researcher also compared the strategies preferred by those principals when divided into subgroups of elementary school, middle school, and high school principals.

The data gathered in this study were used to answer two research questions:

1. In which intervention strategies for overcoming impediments to planned change are differences found when comparing the responses of elementary, middle school, and high school principal subgroups?

2. Which intervention strategies do elementary, middle school, and high school principals (when their responses are combined) consider to be effective in overcoming specific impediments to planned change?

In this study, the researcher attempted to determine whether there were any differences in which of the change intervention strategies elementary school, middle school, and high school principals would employ to help overcome an impediment to planned change. For instance, do high school principals find a given intervention strategy is more effective than an elementary principal would, when applied to the same impediment to change?
An attempt also was made to determine whether there were preferred strategies employed by principals when trying to overcome the "roadblocks" they face when trying to implement planned change. For instance, is there one best way to get a new curriculum accepted by teachers when they are opposed to the new curriculum because they are comfortable with the present curriculum?

Principals were surveyed in an attempt to determine whether there were intervention strategies that principals could successfully implement to overcome impediments to planned change. The survey is often used in educational research to gather information on attitudes and opinions (Isaac & Michael, 1989). The assumption was that the principals surveyed in this study had the characteristics, behaviors, attitudes, and other information that pertained to the issue that was being explored (Isaac & Michael, 1989). There was no method of determining knowledge principals had of the issue that was being explored prior to their responding to this survey, other than to instruct them not to respond to strategies or impediments with which they had no experience.

The 1991 edition of the Michigan Education Directory (1991) was used as the source for principals' names and addresses for this study. The directory is organized alphabetically by school district. The schools in each district are listed, beginning with high schools and then listing middle schools and elementary schools. The schools were reorganized alphabetically by type of school (high school, middle school, and elementary school) to facilitate the
stratified sampling of principals to be surveyed. This stratification process was carried out to ensure suitable and representative data collection.

An advantage of stratified sampling is that it improves representativeness and enables the researcher to study the differences that might exist among various subgroups of a population (Ary, Jacobs, & Razavieh, 1985). In stratified sampling, a researcher may either take equal numbers from each stratum or select in proportion to the size of stratum in the population. The latter approach is called proportional stratified sampling (Ary et al., 1985). Using the numbers found in the 1991 listing of principals in Michigan schools, 67% of the 3,094 schools were elementary schools, 18% were middle schools, and 15% were high schools. Using proportional stratified sampling, surveys were sent as shown in Table 1.

<table>
<thead>
<tr>
<th>Subgroup</th>
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<tbody>
<tr>
<td>Elementary schools</td>
<td>234</td>
</tr>
<tr>
<td>Middle schools</td>
<td>62</td>
</tr>
<tr>
<td>High schools</td>
<td>53</td>
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</tbody>
</table>
Definitions of Terms

Impediments to planned change. For the purposes of this study, an impediment to planned change is any circumstance that might cause changes, which are being set in motion by elementary school, middle school, or high school principals, to fail when an attempt is made to implement them.

Intervention strategies. In this study, intervention strategies for overcoming impediments to change were tactics that elementary school, middle school, and high school principals might choose to use to help negate impediments to planned change that seem to occur in the school setting.

Chapter Summary

A problem that exists in education today was identified in Chapter I. At a time when schools are being attacked for ineffectiveness, there is a nationwide movement toward change in K-12 education. In this chapter, the researcher further explained that many of those who write about planned change, impediments to planned change, and planned change intervention strategies have written that the person responsible for implementing change needs to be aware of the common impediments to change and the suggested strategies for overcoming these impediments to planned change. Chapter I also contained a discussion of the problem to be studied, which includes the research questions that guided this study, the purpose of the
research, and a brief description of some of the methods that were used.

In Chapter II, a review of the literature relating to planned change, including impediments to planned change, intervention strategies for overcoming impediments to planned change, and the principal's role in planned change, can be found. Specific processes and procedures used in carrying out the study are described in Chapter III, while the findings of the study are presented in Chapter IV. In Chapter V, conclusions are drawn and recommendations are made.
CHAPTER II

REVIEW OF LITERATURE

Introduction

In this chapter, a review of related literature is presented. The purpose of the review of literature is to develop a rationale for studying the research questions posed in Chapter I, the methods described in Chapter III, and the hypotheses tested and explained in Chapter IV. This is accomplished through the three topics reviewed in this chapter: impediments to planned change, intervention strategies, and the role of the kindergarten through 12th-grade principal as the change agent in the educational setting.

Impediments to Planned Change

There is a common colloquialism in this country, which states that there is nothing more constant than change. This saying needs to be amended, when referring to kindergarten through 12th-grade education, to say there is nothing more constant than change, except in kindergarten through 12th-grade education, because, until recently, change, especially planned change, seemed to be a rare commodity in the public schools in the United States. When planned change does occur, it usually still coordinates with the "deep structure" of the schools; its purpose is to control. This was
confirmed in a project completed by Goodlad and reported on by Tye (1987), in which a cross-section of kindergarten through 12th-grade schools from urban, suburban, and rural settings were studied to see how they were similar or different. The study's conclusions indicated that kindergarten through 12th-grade schools in the United States were remarkably similar, with all schools containing an overriding "deep structure" whose purpose was to control students. From physical plants, to curriculum, to how teachers and administrators are educated, all schools tend to be the same (Tye, 1987). One large impediment to planned change, and perhaps the hardest to overcome, is the prevailing, underlying purpose of schools--to control (Tye, 1987).

There are many types of planned change that might occur in a school. Planned change might occur in the curriculum, in the physical plant, in class schedules, in the grading system, in grade levels contained in a building, in the management system, in disciplinary programs, or in a multitude of other areas. For every planned change an educator, parent, or student may suggest, there may be an abundance of reasons why that change may not succeed.

There are many ways in which planned change can be impeded. Hershey (1986) broke down these factors into three major categories: individual behavior, organizational and environmental factors, and loyalty to groups or constituencies. Hershey's model can be useful when looking at the literature involving impediments to planned curricular change and for organizing the various ideas on why
planned change is so difficult to implement, so slow to take root, and so easily abandoned. Hershey further broke down the three major categories as follows:

1. Individual behavior
   A. Fear
   B. Inertia
   C. Self-centeredness
   D. Lack of vision

2. Organizational and environmental factors
   A. Structure
   B. Communication
   C. Direction

3. Loyalty to groups or constituencies, not curriculum
   A. Administration
   B. Curricular committees
   C. Faculty
   D. Students
   E. Boards of education
   F. Accreditation agencies
   G. Peers
   H. Specialty organizations
   I. Unions
Individual Behavior

The individual-behavior fear is of critical importance as an impediment to planned change. McGregor's collected essays (Bennis & Schein, 1966) spoke about Maslow's hierarchy of needs. The most basic of those needs are motivated by fear of hunger, safety, security, and loss of dwelling place. Any change that a person sees as a possible threat to those basic needs will be vehemently opposed.

Corson (cited in Ingham, 1966), in a paper prepared for a conference for administrators of adult education, also identified behaviors that interfere with planned change. He stated that planned curriculum change is hard to accomplish because instructors are not able to foresee (vision) that there is a need for "course modification" to serve the changing needs of students. Corson went on to blame leaders for their inability to lead their colleagues in formulating new curriculum or developing new intellectual concepts. Most leaders are also very ill equipped to persuade the "establishment" in their schools that a change is needed. Corson listed four reasons planned change is impeded when leaders cannot move their colleagues: (1) individualism of the instructor, (2) the instructor's isolation from the realities of the outside world, (3) the leader may not have the expertise to convince the instructors or be a strong advocate for the change, and (4) inertia by those
(i.e., superintendent and board of education) who should be strong proponents of the planned change.

Planned curricular change can be impeded by a lack of vision, a clearly shared understanding of the educational objectives of an organization, and the failure to evaluate proposed innovations in light of those objectives (Pullybank, 1971). Pullybank, in his synthesis of literature on planned curricular change, indicated that part of the problem is a lack of communication and the failure of the leader to acknowledge that any new program must be "sold" to those who must implement it. Often the planned change is dictated, not "sold."

Impediments to planned curricular change can occur when teachers are asked to get retraining for a new program outside of the normal school day (Pullybank, 1971). Since it is difficult to provide training during the school day and since some teachers are reluctant to get training on their own time, many innovations, although good, fall along the wayside.

Institutional age can cause clients to resist planned change. An organization with well-established traditions may have great trouble changing. The chant "But we have always done it this way" is the battle cry often heard in these organizations. Dill and Friedman (1979), in their research on innovation and planned change in higher education, concluded that the change agent often has great problems overcoming traditionalism encountered in these organizations. Many of the teachers and administrators who believe
it has always been done "this way" also believe this must be the best way. Thus, there is no need to change to a new method (Bushman, 1989). This argument is often coupled with a lack of credibility for the innovator. The teachers or administrators do not believe that the innovator is knowledgeable in the subject area, or that the innovator does not understand the problems of their school.

Sometimes the largest impediments to planned change seem to revolve around the selfish interest of some of those working within the organization. Many will resist planned change when the change seems to offer benefits to some at the expense of others, particularly themselves (Havelock & Havelock, 1973; Lippett, Watson, & Westley, 1958). Those who fight hardest against planned changes, predictably, are those who see the proposed changes as a threat to their livelihood or social standing within an organization (Bennis et al., 1961). This selfish interest or perceived need to act for self-preservation may cause those affected to engage in activities whose purpose is to sabotage a proposed change.

One of the greatest problems faced by change agents in the kindergarten through 12th-grade educational setting is the lack of trust between the change agent, often the administrator, and the client, often the teacher. One reason for the mistrust between parties is that teachers have been asked to "buy into" changes many times in the past. Often their willingness to sample proposed innovations has bought them nothing but frustration. Trump (1987),
in his writings from the perspective of a principal, pointed out that teachers have become the "victims" of one "bandwagon" after another; and now, when a change agent thinks that some change can really make a difference, teachers are not willing to "get on the wagon" again.

Organizational and Environmental Factors

Organizational and environmental factors can have an impeding effect when an organization tries to implement planned change. Improper structure for the change, poor communication between the person responsible for directing the change and those responsible for implementing the change, and improper or incomplete direction from those responsible for directing the change can all have an impeding effect (Hershey, 1986).

Havelock and Havelock (1973) brought together "50 nationally recognized leaders of research and training on educational change" (p. 4) at a conference in Clinton, Michigan. In summarizing the research of these leaders, it was found that those responsible for implementing planned change, whom Havelock and Havelock called clients, may not have been given training equivalent to the complexity of the desired change. They found, as did Lippett et al. (1958), that sometimes a planned change fails because it is too complex for the clients expected to implement the change (Dill & Friedman, 1979; Havelock & Havelock, 1973). Without the proper knowledge and training, a planned change is doomed to failure.
Mills (1990), in his guide to school improvement, cited case studies done by Gross (1977) which identified seven major impediments to planned change in education. These seven impediments underscore the importance of the organization's role in preparing for planned change and of environmental factors that can ultimately cause a planned change to succeed or fail. The seven impediments are:

1. School systems fail to carefully diagnose educational problems.

2. Administrators fail to recognize the importance of the implementation stage of the change process.

3. School systems introduce innovations in a disjointed manner.

4. School systems fail to take a critical look at an educational innovation before trying to implement it.

5. Schools seldom have monitoring and feedback systems in place as part of the planned change.

6. School systems fail to involve teachers and the community in the early stages of developing a planned change proposition.

7. Administrators fail to provide necessary leadership.

Planned curricular change can fail because those responsible for implementing the change may misunderstand the change. In a synthesis of research on failed innovations in the 1970s and early 1980s, Margolis and McCabe (1988) found that people typically assume that they understand each other when, in fact, they do not. These
misunderstandings can cause "pseudo conflicts" because of semantic differences, insufficient exchange of information, or "noise" in the system.

Semantic differences can serve as an impediment to planned change because parties involved in planned change may have vastly different connotations for terms like "cooperative learning" or "behavioral contracts." This is yet another form of poor communication, and when this occurs, misunderstandings about the purpose of the innovations may cause the innovations to fail. Insufficient information can also be very dangerous to an innovation's chance of survival. If parents and teachers lack sufficient information, they will fill in the gaps with their own knowledge to gain closure. Incorrect assumptions may lead to the demise of the innovation. Noise, also known as prejudice and emotionality, in the system may also cause the innovation to fail. Parents or teachers with a prejudice or an emotional "ax to grind" can be very persuasive in a community or school. Their misunderstanding can cause an innovation to fail (Margolis & McCabe, 1988).

Not understanding the implications a planned change may have can also cause those affected by the change to experience some discomfort. Lippett et al. (1958), in The Dynamics of Planned Change, studied much of the behavioral and social research, up to the mid-1950s, on human relations, organizational development, and group dynamics. Their purpose was to show how a person trying to
effect a planned change, whom Lippett et al. called a change agent, could best be effective when working with individuals, groups, or committees (Havelock & Havelock, 1973). The research of Lippett et al. indicated that the planned change may offer too much or not enough freedom, or it may not offer the structure that the client desires. The resulting discomfort may cause the change agent to fail.

In case studies of elementary, middle, and high schools (Corbett, Firestone, & Rossman, 1987), resistance to planned change was linked to the fit between a school's culture and the proposed change (Sarason, 1983). Planned changes were greeted with great suspicion and reluctance when expectations for behavior, embedded in a new practice, policy, or program, did not coincide with the existing conceptions of school life or school curricula. Some curricula or practices are so "sacred" that changes in these areas are nearly impossible to accomplish.

Loyalty to Groups or Constituencies, Not the Curriculum

Loyalty to various groups or constituencies instead of the curriculum is the third major category of impediments to planned change identified by Hershey (1986). These loyalties can have a detrimental effect on planned change if the person responsible for supervising the change cannot overcome them.
Two such examples of these loyalties were subjects of research by Lippett et al. (1958) and Havelock and Havelock (1973), who indicated, in their efforts to synthesize the research of experts in the genre of planned change, that forcing changes or perceived changes in job roles within an organization can cause clients to resist change. The clients may think that traditional relationships will be altered because of the proposed change.

Klein (cited in Bennis, 1966), basing his comments on his work in the Cooperative Project for Educational Development, found that the alteration of job relationships can interrupt the status quo of the organization. This can cause the insecure individuals in an organization to form resistance to the proposed change, a resistance motivated by fear.

Gross and Herriot (1979) found, when studying loyalty within groups and constituencies, that success came to innovative projects where people involved in the planned change process saw power being gained, not lost. Loss of power was perceived when there was a lack of school control over budgets, too little teacher involvement and commitment, and insufficient leadership support.

In a three-year study of schools in Colorado dealing with shared decision making (Mitchell, 1990), several blocking techniques were observed as impediments to planned change. The techniques were noticed most often where there were outdated policies reflecting central control, perceptions of the principal as the prime manipulator, master agreement problems, and resistance from
department chairpersons and the board of education. Mitchell concluded that it took several years and many tries to develop enough trust to get all groups of employees and the community working together to implement planned change.

Large urban districts are not much different from their rural counterparts. Dyer (1984) identified six inhibitors and deterrents to planned change in urban school systems, which were very similar to those found in rural settings:

1. Parental attitude exhibited opposition to any planned change that was different from the traditional challenges of their own education.

2. Teachers cited a need for clarification of the type of change and the need for it, a lack of confidence in their own abilities to implement the planned change, and lack of supplies and inservice needed to implement planned change.

3. The morality of tradition rose to the surface from nearly all groups. Most preferred to maintain the status quo.

4. Teacher organizations tend to be very protective of their membership, and no change stands much of a chance without their support.

5. The bureaucratic structure of schools moves very slowly because it wants to maintain its "power" over others. Continuity and the preservation of order are high priorities.
6. School administrators, usually the principal, are often protective of their personal power, and if they are afraid of a loss of power and do not push an innovation, failure will occur.

Lack of trust is a matter of concern that has been expressed by practicing principals and writers in the NASSP Bulletin (Pipho, 1985; J. M. Trump, 1987). These authors believed that much of this lack of trust has crept into the planned change process because of the adversarial relationship that has developed between teachers and administrators in the collective-bargaining process. Teachers may not trust the motives of administrators when change is suggested. The teachers may believe that the change is not good for students, not in their own or the bargaining unit's best interest, or represents a change in the conditions of employment.

Stover (1993), in School Board News, supported this position, noting that "resulting gridlock has slowed many efforts to revamp schools. And it has raised serious questions about the role of teachers unions in school reform" (p. 6). Whatever the reason, teachers often are suspicious and reluctant to implement a planned change without making it a bargainable issue. When planned change must be accompanied by bargaining and contract negotiations, the process may be impeded dramatically.

Once all of the other impediments to planned change have been reviewed, the change agents themselves must be scrutinized. Change agents, who often are the organization's leaders, often are their own greatest impediment. They may lack the power base in their
organization to implement, sustain, and institutionalize the desired change. Often, they are incapable of neutralizing conflicts with their superiors, peers, or subordinates and cannot neutralize competing forces for the status quo or other planned educational changes (Lippett et al., 1958).

Planned Change Intervention Strategies

Leadership will usually be the deciding factor in implementing planned educational change (Ornstein, 1988). In his book Leadership, Burns (1978) wrote about the type of leader who can act as an effective change agent when implementing planned change intervention strategies. Burns discussed the difference between a "transformational" and a "transactional" leader. A transformational leader causes the followership to rise to a higher level of acceptance concerning the leader's agenda. In fact, the leader's agenda often becomes the actual agenda of the followership. A transactional leader never really gets the followership to internalize the leader's agenda. Often the transactional leader gets the change accomplished through a tradeoff for something the follower wants, but the change will not usually be long-lasting. In the "market place" of planned change, the line between the two types of leaders is difficult to discern. However, the leader with transformational tendencies will be much more effective when implementing long-lasting planned change and planned change intervention strategies.
Based on the results of his study on modes of influencing planned change, B. Smith (1963) indicated that there are three basic ways of changing educational practice. Planned change can occur as a result of scientific study. A scientist, for example, might discover new information about how children learn, and thus, educators might change their teaching strategies. Another reason that planned change might occur is due to legislative action. The legislature might dictate change, as was the case with Public Act 25 in Michigan in 1990, where districts are expected to use the state's core curriculum, develop school-improvement plans, and present annual reports to their communities. A third way in which planned change might occur would be through the development of new materials. Many curricula are textbook driven. If a new text is developed, change will probably occur. One of the most recent new materials that has had a wide-ranging effect on educational change is the computer. Of the three, legislative action for mandated change is the most effective because the tendency of educators has been to resist change (B. Smith, 1963).

Havelock and Havelock (1973), in a study of planned change experts, and Becker (1973), in his role as director of the Social Studies Diffusion Project at Indiana University, agreed that one method of intervention that may be successful as an intervention strategy is formal short- and long-term planning by the change agent. A conscious plan (vision) based on study of all aspects of the planned change must be developed. This planning must be set up...
to anticipate problems and have plans of action ready to implement
to overcome the obstacles that threaten the implementation or
continued implementation of the planned change.

A strategy that may prove to be very effective in overcoming
obstacles to planned change is the use of opinion leaders to help
convince the clients that the change is desirable and good for both
students and teachers (Havelock & Havelock, 1973). J. L. Trump
(1963), the Associate Secretary for the National Association of
Secondary School Principals (NASSP), a former practicing principal,
and a member of the research team in the NASSP Model Schools
Project, pointed out that it is necessary to use one's opinion
leaders to speak to teachers, to write brochures, and to give
demonstrations to convince peers that a proposed change is
worthwhile. In a synthesis of literature on change, Ornstein and
Hunkins (1988) also noted the importance of personal contact as a
means to persuade others of the veracity of a given change.

One problem that change agents might experience in
implementation of planned change is the reluctance of teachers to
add more work, in planning and learning about a proposed change, to
an already busy schedule. For a planned change to succeed, those
responsible for implementing that change must be working from a
common knowledge base (Tobin & Espinet, 1989). Without a common
knowledge base, teachers will evaluate a proposed change based on
prior knowledge, that which they knew before the change was
proposed. Without proper understanding, teachers may not be able to
grasp the ideas behind a change. Inservice training (Ornstein & Hunkins, 1988) and involvement in professional activities (Becker, 1973) can provide the knowledge, but teacher willingness to participate in professional-development activities will likely require some type of reduction of work load (J. L. Trump, 1963).

Many of the problems associated with the implementation of planned change can be avoided through clear communication. Schrag (1989), basing her comments on the Washington State Initiatives on Change, stated that clear communication is necessary before and during the early stages of planned change. The first six months of the change process are a time of confusion and anxiety. Clear communication of goals, activities, and timeliness are necessary. Planned change efforts must include letting those instituting or being affected by the change know what is being changed and why.

Barriers to planned change do not occur as often in educational settings where risk taking is encouraged and rewarded. Both Becker (1973) and Brickell (1963), consultants on educational experimentation to the Commissioner of Education in New York State, wrote about the supportive, nonthreatening atmosphere that must be cultivated by administrators and the board of education for this type of setting to exist. Havelock and Havelock’s (1973) research indicated that, in addition to support and encouragement from the innovators, encouragement must also come from the informal personal contacts of the implementer’s peers.
Two strategies that work together to help overcome obstacles to planned change are decentralization of authority and user-initiated change. This strategy today carries a new name, site-based management. This theory, borrowed most recently from the Japanese, can be extremely effective in allowing planned change to proceed. Having those responsible for the implementation of the change involved in the planning and initiation stage will help to ensure that the change will have the support and understanding necessary to withstand the time it will take to become adopted as their own by the educational community (Havelock & Havelock, 1973). Stover (1993) supported this idea of shared decision making. He stated that local teacher unions are often uncooperative, but schools are finding that when they work hand in hand with teachers they can bring the necessary changes to the classroom.

Sometimes a planned change is implemented and seems to be progressing and gaining acceptance. After some time, the change may fail because proper evaluation of its utility was not done. If data had been collected, proof that the change was or was not effective would be available. Without the data, opponents of the change may be able to cripple the planned change to the point where it must be discarded. Work done at the Ontario Institute for Studies in Education has indicated that the constant monitoring of the progress being made toward achieving the stated goals of the change is a key task when attempting to overcome obstacles placed in the path of planned educational change by its opponents (Leithwood, 1986).
The Principal as Change Agent

It is not surprising that the principal has been looked to for leadership within the school setting. The principal is often a respected educator, with a wealth of experience and knowledge to draw upon when planning for the future of a school. In addition, many teachers feel that it is the job of the principal to suggest innovation because the principal has the time to do so. This has been the mindset of American educators ever since the advent of the position of the principal-teacher, and it remains the same as we enter the 1990s (Ornstein & Hunkins, 1988).

In their book Instructional Leadership: How Principals Make a Difference, Smith and Andrews (1989) discussed the role of the principal as instructional leader. In a series of case studies, the authors pointed out that the principals of the 1990s are now the instructional leaders in charge of all aspects of their buildings. They serve as resource providers, instructional resources, communicators, and visible presences (Smith & Andrews, 1989). In these roles, the principals become a part of the intricate web of change.

The principal must be the instructional leader, even though few principals can be considered experts in all areas of the curriculum in their schools. The principal becomes an important part of the change process by "initiating the structure for innovation in the school organization" (Licata, Ellis, & Wilson, 1977, p. 26). The
principal's behavior as leader can include describing the relationship between principal and staff, establishing well-defined patterns of organization, opening the channels of communication between principal and staff and between staff and staff, and by establishing methods of proceeding with the change (Licata et al., 1977).

Much of the literature in recent years has identified the principal as the primary change agent when planned change is to occur. "Most of the education reports focus on the key roles of the principal in bringing about needed reforms" (American Association of School Administrators [AASA], 1988, p. 23). This is particularly true in effective-schools and school-improvement literature. The Michigan State Board of Education (1985), in its publication School Effectiveness, named the principal as the number-one variable that makes a difference for school effectiveness. Ornstein and Hunkins (1988), in their synthesis of research on implementing planned curriculum change, indicated that the principal is the one who must take the most active role as the change agent. Lipham et al. (1985) echoed Ornstein and Hunkins:

Success of the implementation phase of the instructional improvement process depends largely on a principal's ability to motivate others--particularly the faculty--to accept, internalize, and behave in accordance with the program planned. (p. 141)

Barth (1976), in his article on principals in their schools, stated that the principal is the most significant influence on
planned change in a school. Administrator support frequently is cited as a critical element in school change.

A principal from Rockville, Maryland, wrote that it is up to the principal if planned change is to take place. Planned change will not occur without the active involvement and leadership of the principal (Cronin, 1963). The principal must use skills such as discrediting the status quo, requesting funds, arranging time for teachers to plan together, and so on. Only the principal can exert the leadership, while at the same time having the authority to do the myriad things that must occur if planned change is to be successful. Principals bear the leadership responsibility for the children’s instructional supervision, so they must also bear the responsibility for being the change agent for planned educational change (Voit, 1989/1990).

In addition to the leadership question, the elementary, middle school, and high school principal subgroups were of interest in this study due to the separate and unique nature of the teaching situations in each type of school, as well as the desire of the researcher to determine whether the separate and unique nature of the teaching situations in each type of school leads to differences in how a principal should proceed when trying to implement planned change.

Although the literature has identified the principal as the main change agent, it has been relatively silent to the issue of differences in the ways that elementary, middle school, or high
school principals may approach their job as change agents. Certainly, there are vast differences in the situations the principals of the three subgroups face on a daily basis. One major difference the principals must confront when trying to effect change is how to manage a different type of teacher-leader in the secondary school as opposed to the elementary school. Many high schools and, to some degree, middle schools tend to have department chairpersons or group leaders, and curriculum specialists, whereas elementary schools tend to have opinion leaders and curriculum generalists instead of formally designated leaders.

Teachers in elementary, middle, and high schools face vastly different teaching situations. For example, elementary classrooms tend to be self-contained, where teachers have basically the same children all day and seldom get the opportunity to meet in specialty areas, e.g., math or language arts. In contrast, high school classrooms vary from hour to hour, with teachers instructing a different group of students every hour. High school teachers often meet in specialty groups. Middle school classrooms tend to use a mixture of the elementary and high school styles. Besides the organization of the classroom, another major difference in teaching situations is the age and maturity of the child taught. These differences may make it necessary for a principal to use different change intervention strategies when attempting to overcome impediments to change.
Chapter Summary

Chapter II contained a review of the literature in regard to common impediments to innovation and planned change, intervention strategies for reducing the influence of impediments to innovation and planned change, and the role of the principal as change agent in the innovation and planned change process. This chapter offered a rationale for the impediments to planned change and the intervention strategies to overcome those impediments chosen to be used in the study, described in Chapter III.

Although ample literature was available in the review of typical impediments to planned change and some intervention strategies for overcoming impediments to planned change, there was no literature that indicated which intervention strategies worked best for specific impediments to planned change. It was clear in the literature, however, that the principal, acting as the curriculum leader within a school building, should be the primary change agent responsible for implementing planned change and for planning the intervention strategies that would help to avoid, reduce the influence of, or eliminate the impediments to planned change.

The literature was unclear, however, as to the differences, if any, that exist in how a principal would approach planned change if impediments arose. The literature did not speak to the differences in the situations faced by a principal in each of the three
subgroups and how those differences would affect the methods chosen to overcome impediments to planned change.

In Chapter III, the methods and procedures used in this study are discussed. The findings of the study are presented in Chapter IV, while in Chapter V the conclusions are drawn and recommendations are made.
CHAPTER III

METHODS

Introduction

The purpose of this study was to identify and compare the intervention strategies that are used by elementary school, middle school, and high school principals in reducing the influence of impediments to planned change, using a survey research design. The methods and procedures used in the study are described in this chapter. The chapter includes eight sections detailing the methodology of the study: (1) planning, (2) research design, (3) pilot study, (4) selection of subjects, (5) construction of the data-gathering instrument, (6) carrying out the survey, (7) processing the data, and (8) data collection and recording.

Planning

Planned change in kindergarten through 12th-grade education is often orchestrated by building principals (Barth, 1976). Their perceptions of intervention strategies that are successful in reducing, avoiding, or eliminating impediments to planned change and the differences, if any, in how principals in the three subgroups rated the effectiveness of the strategies were the major focuses of this study. The researcher attempted to identify and compare these
perceptions among subgroups made up of elementary school, middle school, and high school principals.

No literature was found on the issue of differences in the ways that elementary school, middle school, and high school principals do their jobs, how teachers go about their task of teaching children, and how this might affect the principal’s approach to intervention strategies for overcoming impediments to planned change. The three principal subgroups (elementary school, middle school, and high school) were chosen for comparison with each other because of the dearth of literature on this matter and the researcher’s suspicion that a difference in principals’ preferred use of change intervention strategies would be found.

An integral part of this research was gaining approval for this study from the Human Subjects Institutional Review Board (HSIRB). This approval was obtained in November 1991. Its project reference number is 91-11-15. A copy of the approval is included in Appendix D.

A mailed survey questionnaire was chosen as the data-collection instrument for this study. The survey is the most widely used method of data collection in educational research (Ary et al., 1985; Isaac & Michael, 1989). The mailed questionnaire was chosen over the personal interview or the telephone interview because of its relative inexpensiveness, its ability to reach a large number of respondents in a limited amount of time, its self-administering
nature, and its ability to be made anonymous, thus eliminating some chances of response bias (Ary et al., Isaac & Michael, 1989).

Through this instrument, the researcher asked respondents to rate selected intervention strategies from 100 to 0, with 100 representing the highest rating and 0 representing the lowest rating. Respondents were asked not to give the same rating to more than one strategy. They were encouraged to show the strength of each intervention strategy, in comparison to other such strategies, by the placement and relative distance between ratings on the rating scale (see Appendix B).

The survey instrument was mailed to elementary school, middle school, and high school building principals in Michigan; these principals were selected through a proportional stratified random sampling procedure. Data were collected from the three subgroups of principals to help determine the most effective intervention strategies for specific impediments to planned change. The task of the principals was to rate the effectiveness of various intervention strategies with regard to specific impediments to planned change, based on their experience with the intervention strategies in the field.

Research Design

The researcher attempted to determine whether there were any differences in the preferred strategies for overcoming impediments to change (identified in Chapter II) when comparing elementary
school principals to middle school principals, middle school principals to high school principals, and elementary school principals to high school principals. An attempt also was made to determine whether there were preferred intervention strategies used by principals at the elementary school, middle school, and high school levels (as well as for kindergarten through 12th-grade principals when considered as a single group) in Michigan to overcome some of the common impediments to change, as identified in Chapter II.

In this research, three different variables were taken into consideration. One set of variables considered throughout this research was the 10 impediments to change identified through a content analysis of the literature reviewed in Chapter II:

1. The planned change causes those responsible for implementing the change to believe it may cause undesirable changes in their jobs.

2. The planned change is too complex for those expected to implement the change to understand.

3. The planned change is perceived as disruptive because it may give students too much freedom.

4. The planned change is suspected to be a short-term educational fad.

5. The planned change makes people uncomfortable because it will change the way "it has always been done."
6. The planned change may upset labor groups and cause a "change in the conditions of employment" and presents contract problems.

7. The planned change may require those responsible for implementing the change to get training on their "own time," outside of regular school day hours.

8. The planned change is being impeded by misunderstandings between the principal and those expected to implement the change.

9. The planned change is being opposed by parents who see it as a change from the traditional challenges of their own education or from the moral values of the community.

10. The planned change seems doomed to failure due to a lack of support from the superintendent and the board of education.

Another set of variables throughout this research project was the nine intervention strategies identified through a content analysis of the review of literature in Chapter II. Principals were asked to rate the effectiveness of these strategies when used as techniques for overcoming the impediments. The nine intervention strategies were (1) research-based studies, (2) legislative mandates, (3) new materials, (4) long- and short-term planning, (5) persuasion by opinion leaders, (6) inservice education, (7) nontaxing atmosphere, (8) decentralized authority, and (9) parental pressure for or against.

The final set of variables in this research study was the three levels into which the researcher divided the principals who
were surveyed: (1) elementary school principals, (2) middle school principals, and (3) high school principals.

The Pilot Study

A pilot study of the questionnaire was conducted in two parts (see Appendix A). The first part of the pilot study involved principals in school districts in southwestern and south-central Michigan as respondents. Each principal from these districts was mailed a copy of the cover letter, the instructions, and the questionnaire. The purpose of the pilot study was to determine the effectiveness of the letter of introduction, clarity of instructions, understandability of questionnaire items, ease of completion, and time to complete. Suggestions were solicited from the principals involved in the pilot study to make the letter of introduction more effective, the instructions clearer, the questionnaire easier to respond to, and the length of time required to complete the questionnaire more reasonable.

Information gained through the pilot study led the researcher to make changes in the format of the letter of introduction, to include an introduction statement to the "Definitions of Intervention Strategies" page, to include an example on the "Instructions" page, and to consolidate intervention strategies i and j into one strategy (see Appendix B).

The second part of the pilot study involved sending the questionnaire, with changes made as a result of principals' comments
regarding the first part of the pilot study, to 10 principals whose names were randomly selected from the 1991 Michigan Education Directory. The purpose of this part of the pilot study was to discover whether the survey would be completed in a manner consistent with the instructions and to determine the expected response rate. These responses were included in the study. Nonrespondents were mailed follow-up surveys, as described later in this chapter, in the section entitled Carrying Out the Survey.

Of the 10 surveys that were sent to principals in the second part of the pilot study, three were returned. The pilot study confirmed for the researcher that the instructions were clear because the returned surveys were completed in accordance with the instructions.

Selection of Subjects

The population sampled in this research project comprised practicing kindergarten through 12th-grade building principals in Michigan. According to the Michigan Education Directory (1991), there were 3,094 kindergarten through 12th-grade building principals in Michigan in 1991, excluding those who were seventh- through 12th-grade principals and those who were kindergarten through 12th-grade principals. From a population of 3,094, a sample of 350 principals was chosen (Isaac & Michael, 1989). "When there are two or more ways of classifying the data . . . it is important to insure that each category is proportionally represented in the sample" (Isaac &
Michael, 1989, p. 190). A breakdown of the 3,094 principals into subgroups to be sampled showed that 2,062 (67%) of the principals were in elementary school buildings, 550 (18%) of the principals were in middle school buildings, and 472 (15%) were in high school buildings. A proportional stratified random sample then required that 234 elementary school principals, 62 middle school principals, and 53 high school principals be sampled.

Each principal from each of the three subgroups was assigned a number. The numbers were assigned sequentially, in the order in which a principal's name appeared in the Michigan Education Directory (1991), beginning with 000 as the first number for each group sampled. Three hundred fifty principals were chosen using the random numbers table in Introduction to Research (Ary et al., 1985).

Construction of the Data-Gathering Instrument

A questionnaire was developed, listing 10 impediments to planned change and nine intervention strategies. Although potentially there are many more than 10 such impediments, only 10 were chosen for inclusion in this study. Likewise, although conceivably there are many more intervention strategies than were used in this study, only nine were chosen for inclusion. The impediments and intervention strategies chosen for inclusion in this study were selected from a content analysis of the research surveyed and reported in Chapter II.
"Content analysis is a method of studying and analyzing communications in a systematic, objective and quantitative manner" (Kerlinger, 1986, p. 477). An approach called "quantification" was used in selecting the intervention strategies and impediments. "The most common form of quantification corresponds to nominal measurement: count the number of objects in each category after assigning each object to its proper category" (Kerlinger, 1986, p. 481).

The researcher had no preconceived notions of what these categories or the corresponding impediments and intervention strategies might be. The researcher recorded each impediment and intervention strategy as it was found in the literature. Those categories mentioned most in the research were then chosen for inclusion in this research. The research from which these impediments and intervention strategies were chosen comprised case studies and empirical studies examined in the literature review.

The next step in questionnaire construction was for the researcher to write the survey. The researcher asked respondents to rate each intervention strategy for a specific impediment to planned change, rating each strategy from 100 (meaning this strategy would nearly always be successful when used to overcome this impediment to change) to 0 (meaning this strategy would nearly always be unsuccessful when used to overcome this impediment to change). Respondents were instructed to use each number 100-0 only once when rating their responses, even if two intervention strategies were
nearly equal in effectiveness. If, for example, two intervention strategies were to be rated nearly identically in effectiveness, then one might be assigned a rating of 75 on the scale, whereas a strategy only slightly less effective might be assigned a rating of 74 on the scale, or any other number less than 75, as deemed appropriate by the respondent. Respondents were also instructed not to respond to impediments or strategies with which they had no actual experience.

The initial questionnaire was introduced by a cover letter stating the purpose of the study. The letter included a request for cooperation and assurances that the respondent's responses would be confidential. Each questionnaire was marked with an identification number to facilitate follow-up procedures (Ary et al., 1985). Respondents were informed that identification numbers were there to enable the researcher to check the respondent's name off of the mailing list when the survey was returned. Respondents also were informed that the number would be removed from their survey as soon as its receipt was recorded. An offer to share the study results with the respondent, along with a request for prompt return and an expression of appreciation, also was included (see Appendix B).

In the follow-up letter, a different cover letter was included. This letter contained a more direct appeal, stressing the importance of each survey to the usefulness of the study being conducted. In the letter, the researcher stressed that if the study was to be
truly representative of all principals in Michigan, he needed that respondent's rating of the intervention strategies (see Appendix C).

Carrying Out the Survey

The survey was conducted during 1992. After analyzing the results of the pilot study, the cover letter, instructions, and questionnaire were revamped using suggestions from the principals who participated in the pilot study (see Appendix B). A survey packet including a cover letter, instructions, a questionnaire, definitions of the intervention strategies, and a return envelope was mailed to each of the principals selected for the study.

Specific instructions for the respondents to follow were included in the survey (see Appendix B). Respondents also received a page entitled "Definitions of Intervention Strategies." This page contained the definitions to help respondents understand what each of the intervention strategies was intended to mean (see Appendix B).

If a respondent did not return the questionnaire within 10 days, a follow-up letter was sent as a reminder that the respondent's input was important to the researcher (see Appendix C). Respondents were urged to return the survey "today." An offer was made to send another questionnaire to respondents if theirs had been misplaced or never received.

A second follow-up was sent a month after the initial mailing to those respondents whose questionnaires had yet to be returned.
The follow-up survey packet included a cover letter restating the importance of the study and the respondent's input, another copy of the questionnaire, instructions and definitions of intervention strategies, and a prestamped return envelope.

After 10 weeks, those remaining respondents whose questionnaires had not been returned were declared nonrespondents (Ary et al., 1985).

Processing the Data

The research questions asked in this study probe two areas of interest:

1. Are there differences in how the classifications of principals rate these specific change intervention strategies?

2. How do elementary, middle school, and high school principals rate specific change intervention strategies as they relate to particular impediments to planned change?

For Research Question 1, which asks if there are any differences in how the three subgroups of principals rate the effectiveness of change intervention strategies for specific impediments to planned change, the means were calculated for each intervention strategy for each of the three subgroups. A statistic was found that allowed the researcher to measure any difference, at the .05 alpha level, that might be found in the respective principal group ratings.
The statistical procedure best suited to this task is one-way analysis of variance (ANOVA). In order for ANOVA to work, there must be two types of variables: dependent and independent. The independent variables in this study were the various levels of the principalship: elementary school principals, middle school principals, and high school principals. The dependent variable the researcher was interested in studying was the effectiveness of intervention strategies when applied by principals to circumstances, called impediments, that prevent planned change from occurring in the kindergarten through 12th-grade setting.

This researcher was concerned primarily with the variations in group means. In Chapter IV, these data are presented in a separate table for each different impediment to planned change found among the three groups that were compared.

After completing the ANOVA, the researcher performed a post hoc analysis, using least squares difference. This procedure was chosen because it shows where differences are as a result of the rejection of the null hypothesis.

For Research Question 2, which asks how the three subgroups of principals rate the effectiveness of the 10 change intervention strategies when applied to each impediment to change, a number had to be found that could describe how each of the three subgroups of principals rated the specific change intervention strategies (lettered alphabetically, from a through i) for each impediment to planned change (numbered from 1 through 10). The statistic chosen
to do this was the mean for each change intervention strategy for each impediment to planned change.

Tables were devised for reporting the means for each impediment. In these tables, means for all three subgroups of principals are reported together for each impediment. Also shown in these tables are the standard deviation and the number of respondents and the highest and lowest rating a strategy received.

For Research Question 2, no sophisticated treatment of the data needed to be done. In this series of tables, the statistic in which the researcher was most interested was the mean for each strategy. This indicated which strategy had the highest average score when all three subgroups of principals were considered together and when they were considered separately. For reporting of effectiveness, strategies rated 60.0 or higher were noted as being effective. The rating of 60.0 was chosen by the researcher because it represents a rating that is often considered by educators as an acceptable score. On a rating scale of 0 to 100, 60.0 is often considered as the lowest passing score.

Data Collection and Recording

Data were collected over a 2-month period. When surveys were received, the researcher removed the identification codes from the surveys and noted that they had been received. The researcher recorded and coded the data, indicating the rating principals gave each intervention strategy for each impediment, using the Word
Perfect computer program. The researcher then processed the data with the aid of the University Computing Services at Western Michigan University, using the VAX computer system and the Statistical Package for the Social Sciences (SPSS) (Norusis/SPSS, 1990).

Chapter Summary

The methods and procedures used in this study were described in Chapter III. The chapter contained an overview of the methodology and a discussion of the planning stage of the study, as well as an explanation of why the elementary school, middle school, and high school principal subgroups were chosen for the study. The questionnaire that was used to collect the data also was discussed.

Also described in this chapter was the sampling phase of the study. The population was chosen using Isaac and Michael's (1989) breakdown of how many members must be sampled to have a representative group. The research design, pilot study, data-collection methods, and data-analysis procedures also were described.

The findings from this study are found in Chapter IV, and the conclusions and recommendations are presented in Chapter V.
CHAPTER IV

FINDINGS OF THE STUDY

Introduction

The purpose of this study was to attempt to determine whether elementary school, middle school, and high school principal subgroups found some intervention strategies more effective than others when applied to the same impediment to change and whether there were intervention strategies for selected impediments to change that principal subgroups found more effective than others in overcoming impediments to change. To accomplish this purpose, a survey was developed to gather and record the answers given by the elementary school, middle school, and high school principals who responded.

The findings of the study are reported in this chapter. The chapter is divided into four sections: the introduction; a report of the findings for Research Question 1 (dealing with the differences found in effectiveness of intervention strategies as rated by the principal subgroups) and Research Question 2 (dealing with a comparison of the effectiveness of intervention strategies as rated by principals when considered as one group); discussion, interpretation, and evaluation of the findings; and a chapter summary.
The questionnaire contained 10 impediments to change and nine potential intervention strategies for overcoming the impediments. The questionnaire was designed to gather data on how the intervention strategies were rated for each of the 10 impediments.

Respondents were asked how they would rate the effectiveness of research-based studies, legislative mandates, purchase of new materials, long- and short-term planning, persuasion by opinion leaders, inservice education, a nontthreatening atmosphere, decentralized authority, and parental pressure for change when considering the following 10 impediments:

1. The planned change causes those responsible for implementing the change to believe it may cause undesirable changes in their jobs.

2. The planned change is too complex, for those expected to implement the change, to understand.

3. The planned change is perceived as disruptive because it may give students too much freedom.

4. The planned change is suspected to be a short-term educational fad.

5. The planned change makes people uncomfortable because it will change the way "it has always been done."

6. The planned change may upset labor groups and cause a "change in the condition of employment" and presents contract problems.
7. The planned change may require those responsible for implementing the change to get training on their "own time," outside of regular school day hours.

8. The planned change is being impeded by misunderstandings between the principal and those expected to implement the change.

9. The planned change is being opposed by parents who see it as a change from the traditional challenges of their own education or from the moral values of the community.

10. The planned change seems doomed to failure due to a lack of support from the superintendent and the board of education.

Report of the Findings

The report of the findings of this research study is presented in three sections: (1) the demographics of the respondents who were surveyed; (2) differences when comparing intervention strategies by subgroups, i.e., elementary school, middle school, and high school principals (Research Question 1); and (3) overall mean comparisons of intervention strategies by impediment to change (Research Question 2).

Demographics

Very little information was sought on the surveys to determine demographics of the respondents. Little information was sought because the only demographic information necessary to answer the
research questions was the subgroup (elementary school, middle school, or high school) to which the principal belonged.

Three hundred fifty questionnaires were mailed to principals throughout Michigan. Two hundred thirty-four questionnaires were mailed to elementary school principals, 62 to middle school principals, and 54 to high school principals. Fifty-eight elementary school principals responded to the questionnaire, 18 middle school principals responded, and 22 high school principals returned completed surveys. Eleven individuals returned blank surveys, explaining that they did not have time to complete the instruments. (See Table 2.)

Table 2
Survey Response Information

<table>
<thead>
<tr>
<th>Subgroup</th>
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<th>Surveys Returned</th>
<th>% Return</th>
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<td>Middle school</td>
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<tr>
<td>High school</td>
<td>54</td>
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<td>41</td>
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<tr>
<td>Returned, no response</td>
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Research Question 1

The first research question posed in this study was: Are there differences (at the .05 alpha level) in the effectiveness of planned change intervention strategies, as they apply to impediments to planned change, when the ratings of elementary school, middle school, and high school principal subgroups are compared?

Using the data gathered from elementary, middle school, and high school principal subgroups on the 10 impediments to change and the nine intervention strategies applied to each of the impediments, 90 ANOVAs were performed. Of the 90 one-way ANOVAs that were calculated, only 7 showed differences at the .05 alpha level. The seven cases that showed a difference are reviewed in this chapter, along with all other cases. The ANOVAs that did show a difference are noted and discussed. Those that did not show a difference at the .05 alpha level are discussed in terms of subgroup-rated effectiveness. Those strategies that were most effective, with means of 60.0 or higher for all three principal subgroups, and those strategies that were least effective, with means of 40.0 or lower for all three principal subgroups, are noted and discussed.

Impediment 1

No differences were found, at the .05 alpha level, for any of the principal subgroups' mean ratings of the 10 intervention strategies for Impediment 1, when considered by levels. In Table 3,
Table 3

Responses of Principals, by Level, for Impediment 1, The Planned Change Causes Those Responsible for Implementing the Change to Believe It May Cause Undesirable Changes in Their Jobs

<table>
<thead>
<tr>
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<th>Level</th>
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<th>SD</th>
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<th>p</th>
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<td>42.5</td>
<td>27.7</td>
<td>21</td>
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</tr>
</tbody>
</table>

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
ANOVA for each of the nine intervention strategies for Impediment 1, *The planned change causes those responsible for implementing the change to believe it may cause undesirable changes in their jobs*, are listed.

The strategy rated highest by the principal subgroups (60.0 or higher) was *nonthreatening atmosphere*, which was rated highly by all three subgroups. Middle school principals rated it the highest, at 79.1. Ratings by the elementary principal subgroup (67.9) and the high school principal subgroup (75.0) were also strong. This indicates that this strategy was thought to be effective by all three levels of principals.

The only other strategy for Impediment 1 that was rated highly by all three principal subgroups was *inservice education*. The middle school principal subgroup rated this highest, at 75.6. *Inservice education* was also rated highly by the high school principal subgroup (65.9) and the elementary principal subgroup (62.0).

The strategy that was rated least effective by all three levels of principals was *legislative mandate*. This strategy was rated least effective by elementary principals (30.05). Also rating legislative mandate to be an ineffective strategy were the middle school principal (30.1) and the high school principal (39.5) subgroups.
Impediment 2

No differences were found, at the .05 alpha level, for any of the principal subgroups' mean ratings of the nine intervention strategies for Impediment 2, when considered by levels. In Table 4, ANOVAs for each of the nine intervention strategies for Impediment 2, *The planned change is too complex, for those expected to implement the change, to understand*, are listed.

*Inservice education* was the strategy rated most effective by all three principal subgroups. All three levels rated this strategy 70.0 or higher. Elementary school principals rated it highest, at 77.2. Middle school principals also rated this strategy highly, at 73.9. The high school principal subgroup rated this strategy at 70.2.

The only other strategy rated at 60.0 or higher by each level of principals was *nonthreatening atmosphere*. Middle school principals rated it highest, at 75.1. High school principals rated it next highest, at 67.1. Elementary principals rated this strategy lower than did the middle school or high school principals, at 62.8.

The least effective strategy for Impediment 2 was *legislative mandate*. It was rated least effective by middle school principals, who gave it an average rating of 20.8. The elementary school principal subgroup gave it an average rating of 28.5. The high school principal subgroup gave this strategy the highest average rating of 37.8.
Table 4
Responses of Principals, by Level, for Impediment 2, *The Planned Change Is Too Complex, For Those Expected to Implement the Change, to Understand*

<table>
<thead>
<tr>
<th>Strategy</th>
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<th>p</th>
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<td>H.S.</td>
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<td>23.9</td>
<td>22</td>
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<td>Elem.</td>
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<td>H.S.</td>
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<td>20.5</td>
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<td>H.S.</td>
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<td>22.7</td>
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<td>Elem.</td>
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<td>18.7</td>
<td>21</td>
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</tbody>
</table>

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Impediment 3

No differences were found, at the .05 alpha level, for any of the principal subgroups' mean ratings of the nine intervention strategies for Impediment 3, when considered by levels. In Table 5, ANOVAs for each of the nine intervention strategies for Impediment 3, The planned change is perceived as disruptive because it may give students too much freedom, are listed.

When rating Impediment 3, the principal subgroups rated only one strategy, nonthreatening atmosphere, as effective. No principal subgroup rated this strategy above 70.0, but all rated it higher than 60.0. High school principals rated this strategy most effective (64.5). Elementary school principals rated it only slightly lower, at 64.3. Middle school principals rated it at 63.7.

The strategy that the principal subgroups rated least effective was legislative mandate. All three levels of principals gave this strategy an average rating of less than 35.0. Rating it least effective were the middle school principals (21.5). The second lowest rating was given by the elementary school principals (28.3). High school principals rated this strategy at 33.6.

Impediment 4

A difference in effectiveness was found, at the .05 alpha level, in one strategy applied to Impediment 4. The strategy that showed differences among means (p = .004) when comparing the ratings
Table 5
Responses of Principals, by Level, for Impediment 3, *The Planned Change Is Perceived as Disruptive Because It May Give Students Too Much Freedom*

<table>
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<tr>
<th>Strategy</th>
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<th>p</th>
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<td>Elem.</td>
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<td>43.2</td>
<td>27.4</td>
<td>21</td>
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</table>
of elementary, middle school, and high school principal subgroups at the .05 alpha level was Strategy A, research-based studies, when applied to Impediment 4, The planned change is suspected to be a short-term educational fad. In this combination, the elementary principal subgroup's mean rating (51.5) of this strategy was different from the middle school principal subgroup's mean rating (35.3) and the high school principal subgroup's mean rating (28.2) of this strategy. No difference in effectiveness was found, at the .05 level, between the mean rating of the middle school principal subgroup and the mean rating of the high school principal subgroup.

In Table 6, ANOVAs for each of the nine intervention strategies for Impediment 4, The planned change is suspected to be a short-term educational fad, are listed. The strategy on which differences in effectiveness were found is noted.

When rating Impediment 4, none of the three principal subgroups rated any of the strategies with an average rating of 60.0 or higher. The strategy closest to this standard was nonthreatening atmosphere. Two of the principal groups rated the strategy above 60.0. Middle school principals gave the strategy an average rating of 64.4, and elementary school principals gave it an average rating of 63.0. High school principals rated this strategy at 56.9.

The strategy rated the lowest in effectiveness by all three levels of principals was legislative mandate. All three principal subgroups rated this strategy at 32.1 or lower. Middle school principals rated it lowest, with an average rating of 25.3.
Table 6
Responses of Principals, by Level, for Impediment 4, *The Planned Change Is Suspected to Be a Short-Term Educational Fad*

<table>
<thead>
<tr>
<th>Strategy</th>
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<th>Mean</th>
<th>SD</th>
<th>N</th>
<th>p</th>
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*Note:* Subgroups with the same superscript differed from each other.

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Elementary school principals gave this strategy an average rating of 30.2, and high school principals rated it at 32.1.

**Impediment 5**

No differences were found, at the .05 alpha level, for any of the principal subgroups' mean ratings of the nine intervention strategies for Impediment 5, when considered by levels. In Table 7, ANOVAs for each of the nine intervention strategies for Impediment 5, The planned change makes people uncomfortable because it will change the way "it has always been done," are listed.

When considering Impediment 5, the principal subgroups rated the strategy nonthreatening atmosphere highest. All three levels of principals, elementary school, middle school, and high school, rated this strategy higher than 70.0. Middle school principals rated it most highly, at 75.1. Also rating it as effective were high school principals (73.6) and elementary principals (72.5).

The only other strategy that all three principal subgroups rated higher than 60.0 was inservice education. Inservice education was highly rated by elementary principals (73.2) and middle school principals (72.9). High school principals found the strategy useful but did not rate it nearly as high as did the other subgroups (62.3).

The strategy that all three principal subgroups found least effective overall was pressure by parents for or against a change. All three subgroups rated the strategy at 45.2 or lower. Rating the
Table 7

Responses of Principals, by Level, for Impediment 5, *The Planned Change Makes People Uncomfortable Because It Will Change the Way "It Has Always Been Done"*

<table>
<thead>
<tr>
<th>Strategy</th>
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strategy lowest were the elementary principals (37.7). Both middle school principals (41.2) and high school principals (45.2) rated parental pressure slightly higher. Another area that was rated quite low overall was legislative mandate, especially by middle school (31.0) and high school (36.4) principals. Both of those subgroups rated it lower than they rated parental pressure. However, the elementary principals' rating of 57.4 gave this item a higher overall rating than parental pressure achieved.

**Impediment 6**

A difference was found (at the .05 level) in the effectiveness of the strategies legislative mandate and long- and short-term planning when applied to Impediment 6. The planned change may upset labor groups and cause a "change in the condition of employment" and presents contract problems.

The first strategy that showed differences among means \( (p = .035) \) when comparing the ratings of elementary, middle school, and high school principal subgroups at the .05 alpha level was Strategy B, legislative mandates, when applied to Impediment 6. The planned change may upset labor groups and cause a "change in the condition of employment" and presents contract problems. In this combination, the elementary principal subgroup's mean rating (48.9) of this strategy was different from the middle school principal subgroup's mean rating (34.9). No differences were found between the elementary school principal subgroup's mean rating (48.9) and the
high school principal subgroup's mean rating (34.9) or between the high school principal subgroup's mean rating (34.9) and the middle school principal subgroup's mean rating (27.8).

The second strategy that showed differences among means (p = .009) when comparing the ratings of the elementary, middle school, and high school principal subgroups at the .05 alpha level was Strategy D, long- and short-term planning, when applied to Impediment 6. The planned change may upset labor groups and cause a "change in the condition of employment" and presents contract problems. In this combination, the middle school principal subgroup's mean rating (63.4) of this strategy was different from the elementary school principal subgroup's mean rating (48.3) and the high school principal subgroup's mean rating (42.5). No difference was found (at the .05 alpha level) between the elementary school principal subgroup's mean rating (48.3) and the high school principal subgroup's mean rating (42.5).

In Table 8, ANOVAs for each of the nine intervention strategies for Impediment 6, The planned change may upset labor groups and cause a "change in the condition of employment" and presents contract problems, are listed. Those strategies on which differences in effectiveness were found are noted.

When considering Impediment 6, principals in the three subgroups rated only nonthreatening atmosphere at the 60.0 level or higher. No subgroup rated it as high as 70.0. The elementary principal subgroup rated nonthreatening atmosphere most effective, with
Table 8

Responses of Principals, by Level, for Impediment 6, *The Planned Change May Upset Labor Groups and Cause a “Change in the Condition of Employment” and Presents Contract Problems*

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Note: Subgroups with the same superscript differed from each other.
a rating of 69.4. The middle school principals rated this strategy at 65.2, whereas high school principals rated it at 64.1.

The strategy that the three principal subgroups rated as the least effective was research-based studies. All three subgroups rated this intervention strategy at 37.7 or lower. High school principals rated this intervention strategy the least effective (23.3). Middle school principals rated it next lowest (26.4), and elementary principals rated it highest of the three subgroups (37.7).

**Impediment 7**

A difference was found (at the .05 level) in the effectiveness of the strategies research-based studies and new materials when applied to Impediment 7. The planned change may require those responsible for implementing the change to get training on their "own time," outside of regular school day hours.

The first strategy that showed differences among means (p = .010) when comparing the ratings of the elementary, middle school, and high school principal subgroups at the .05 alpha level was Strategy A, research-based studies. In this combination, the elementary principal subgroup's mean rating (47.7) of this strategy was different from the high school principal subgroup's mean rating (27.0). No differences (at the .05 alpha level) were found between the elementary school principals' mean rating and the middle school
principals' mean rating or between the middle school principals' mean rating and the high school principals' mean rating.

The second strategy that showed differences among means ($p = .009$) when comparing the responses of the elementary, middle school, and high school principal subgroups at the .05 alpha level was Strategy C, *new materials*. In this combination, the elementary principal subgroup's mean rating (56.6) of this strategy was different from the high school principal subgroup's mean rating (38.7). No differences (at the .05 alpha level) were found between the elementary school principals' mean rating and the middle school principals' mean rating or between the middle school principals' mean rating and the high school principals' mean rating.

In Table 9, ANOVAs for each of the nine intervention strategies for Impediment 7, *The planned change may require those responsible for implementing the change to get training on their "own time," outside of regular school day hours,* are listed. Those strategies on which differences in effectiveness were found are noted.

When considering Impediment 7, the three principal subgroups rated only one intervention strategy, *inservice education*, as effective. No subgroup rated this strategy above 70.0, but all subgroups rated it higher than 60.0. The elementary school principals subgroup rated it highest (66.4), followed by the middle school principals subgroup (63.2) and the high school principals subgroup (60.8).
Table 9
Responses of Principals, by Level, for Impediment 7, The Planned Change May Require Those Responsible for Implementing the Change to Get Training on Their "Own Time," Outside of Regular School Day Hours

<table>
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Note: Subgroups with the same superscript differed from each other.
The strategy that the three principal subgroups rated as the least effective was *parental pressure for or against the change*. All three subgroups gave this intervention strategy an average rating lower than 31.0. Rating it lowest was the middle school principal subgroup (25.0), with the elementary school subgroup (29.9) and the high school subgroup (30.6) rating it slightly higher.

**Impediment 8**

A difference was found (at the .05 level) in the effectiveness of the strategy *long- and short-term planning* when applied to Impediment 8. The planned change is being impeded by misunderstandings between the principal and those expected to implement the change.

The strategy that showed differences among means (*p = .040*) when comparing the ratings of the elementary, middle school, and high school principal subgroups at the .05 alpha level was Strategy D, *long- and short-term planning*. In this combination, the middle school principal subgroup's mean rating (67.4) of this strategy was different from the high school principal subgroup's mean rating (55.7). No differences (at the .05 alpha level) were found between the elementary school principals' mean rating and the middle school principals' mean rating or between the elementary school principals' mean rating and the high school principals' mean rating.
In Table 10, ANOVAs for each of the nine intervention strategies for Impediment 8, the planned change is being impeded by misunderstandings between the principal and those expected to implement the change, are listed. Those strategies on which differences in effectiveness were found are noted.

When considering Impediment 8, the three principal subgroups rated the strategies nonthreatening atmosphere and inservice education as effective. All three subgroups rated nonthreatening atmosphere near the 70.0 level. The elementary principal subgroup gave it the highest rating (76.1), with the middle school principal subgroup's (74.4) and the high school subgroup's (69.5) ratings only slightly lower.

All three principal subgroups also rated inservice education highly; they rated this intervention strategy higher than 60.0 but lower than 70.0. The highest rating was awarded by the middle school principal subgroup (69.3), with the elementary school principal (65.8) and high school principal (60.1) subgroups assigning lower ratings.

The strategies that all three principal subgroups found to be least effective were research-based studies and parental pressure for or against the change. Research-based studies was rated lowest by the high school principal subgroup (28.2). The elementary principal (37.7) and middle school principal (38.2) subgroups rated this strategy only slightly higher. Parental pressure for or against the change was also rated very low by all three principal
Table 10

Responses of Principals, by Level, for Impediment 8, The Planned Change Is Being Impeded by Misunderstandings Between the Principal and Those Expected to Implement the Change

<table>
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<tr>
<th>Strategy</th>
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</table>

Note: Subgroups with the same superscript differed from each other.
subgroups. The middle school principal subgroup (28.5) rated it lowest, followed closely by the elementary principal (31.8) and high school principal (33.5) subgroups.

**Impediment 9**

No differences were found, at the .05 alpha level, for any of the principal subgroups' mean ratings of the nine intervention strategies for Impediment 9, when considered by levels. In Table 11, ANOVAs for each of the nine intervention strategies for Impediment 9, *The planned change is being opposed by parents who see it as a change from the traditional challenges of their own education or from the moral values of the community, are listed.*

When considering Impediment 9, the three principal subgroups rated only the strategy *inservice education* as effective. This was the only intervention strategy to receive a rating of 60.0 from all three principal subgroups. The highest rating was given by the middle school principal subgroup (65.4). The elementary school principal (63.3) and high school principal (64.0) subgroups rated this strategy only slightly lower.

The strategy *nonthreatening atmosphere* achieved a higher average rating when all three subgroups were considered as one, but the rating by the elementary principal subgroup of 59.6, a rating that was not considered effective, kept this strategy from being the highest rated when the subgroups were considered separately.
Table 11

Responses of Principals, by Level, for Impediment 9, *The Planned Change Is Being Opposed by Parents Who See It as a Change From the Traditional Challenges of Their Own Education or From the Moral Values of the Community*

<table>
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The intervention strategy that the three principal subgroups rated lowest in effectiveness was research-based studies. All of the subgroups gave this strategy a low rating. The elementary school principal subgroup gave it the lowest rating (45.1), followed by the middle school principal (46.6) and the high school principal (49.3) subgroups.

**Impediment 10**

A difference was found (at the .05 level) in the effectiveness of the strategy long- and short-term planning when applied to Impediment 10, *The planned change seems doomed to failure due to a lack of support from the superintendent and the board of education.*

The strategy that showed differences among means ($p = .027$) when comparing the ratings of the elementary, middle school, and high school principal subgroups at the .05 alpha level was Strategy D, *long- and short-term planning.* In this combination, the middle school principal subgroup’s mean rating (66.8) of this strategy was different from the elementary school principal subgroup’s mean rating (48.5) and the high school principal subgroup’s mean rating (48.5). No difference was found (at the .05 alpha level) between the elementary school principal subgroup’s mean rating and the high school principal subgroup’s mean rating.

In Table 12, ANOVAs for each of the nine intervention strategies for Impediment 10, *The planned change seems doomed to failure due to a lack of support from the superintendent and the*
Table 12

Responses of Principals, by Level, for Impediment 10, *The Planned Change Seems Doomed to Failure Due to a Lack of Support From the Superintendent and the Board of Education*

<table>
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<td>M.S.</td>
<td>64.1</td>
<td>25.0</td>
<td>16</td>
<td>.556</td>
</tr>
<tr>
<td></td>
<td>H.S.</td>
<td>55.3</td>
<td>28.3</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>Pressure</td>
<td>Elem.</td>
<td>63.2</td>
<td>29.1</td>
<td>54</td>
<td></td>
</tr>
<tr>
<td></td>
<td>M.S.</td>
<td>58.1</td>
<td>32.5</td>
<td>16</td>
<td>.509</td>
</tr>
<tr>
<td></td>
<td>H.S.</td>
<td>54.6</td>
<td>30.6</td>
<td>22</td>
<td></td>
</tr>
</tbody>
</table>

Note: Subgroups with the same superscript differed from each other.
board of education, are listed. Those strategies on which differences in effectiveness were found are noted.

When considering Impediment 10, the three principal subgroups did not rate any of the intervention strategies as effective, at the 60.0 level or higher. *Persuasion by opinion leaders* and *decentralized authority* were given similar ratings by the three principal subgroups; however, in both instances the high school principal subgroup's rating was less than 60.0. For the strategy *persuasion by opinion leaders*, the highest rating was given by the middle school principals (63.9). The elementary school principal subgroup gave it a rating of 62.3, and the high school principal subgroup gave it a rating of 56.9. For the strategy *decentralized authority*, the highest rating was given by the middle school principal subgroup (64.1). The elementary principal subgroup gave it a rating of 62.2, and the high school principal subgroup rated it at 55.3.

The strategy that the three principal subgroups rated as least effective was *new materials*. All three subgroups gave this strategy a low rating. The lowest rating was given by the elementary principals (36.9), followed by the middle school principals (40.6) and the high school principals (43.0).

**Research Question 2**

The data gathered in this study were used to answer the research question: How do elementary, middle school, and high
school principals from Michigan rate the efficacy of selected planned change intervention strategies as they apply to specific impediments to planned change? To answer this question, the mean was calculated for each intervention strategy for each impediment. From these numbers for each impediment, the preferred intervention strategies were identified. Those strategies identified as preferred were the strategies rated 60.0 or higher by the responding principals.

Impediment 1

In the research involving Impediment 1, the researcher wanted to determine which of the intervention strategies principals rated as most effective when a planned change caused teachers to believe that the change might cause undesirable changes in the teachers' jobs. In Table 13, these relationships are shown.

When asked which intervention strategy best overcomes Impediment 1, principals rated nonthreatening atmosphere (71.7) as the best strategy for overcoming this impediment to planned change. Principals indicated that if teachers are working in an atmosphere where they will not be punished if what they are trying does not work, they will be more likely to go along with the change.

The other intervention strategies with a mean of 60.0 or higher were inservice education (65.4) and decentralized authority (60.3). Principals indicated that inservice education is likely to make teachers more accepting of change when it is likely to cause
undesirable changes in their jobs. Decentralized authority means that teachers are allowed to be part of the decision-making process. When this happens, principals indicated that teachers are more likely to accept a change the principal has in mind when they believe that a change may cause some undesirable changes in their jobs.

Table 13

Responses of All Principals to Impediment 1, The Planned Change Causes Those Responsible for Implementing the Change to Believe It May Cause Undesirable Changes in Their Jobs

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Mean</th>
<th>SD</th>
<th>Max.</th>
<th>Min.</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research</td>
<td>33.7</td>
<td>32.4</td>
<td>95</td>
<td>0</td>
<td>93</td>
</tr>
<tr>
<td>Legislative</td>
<td>32.3</td>
<td>28.8</td>
<td>100</td>
<td>0</td>
<td>97</td>
</tr>
<tr>
<td>Materials</td>
<td>43.8</td>
<td>22.3</td>
<td>90</td>
<td>4</td>
<td>93</td>
</tr>
<tr>
<td>Planning</td>
<td>55.5</td>
<td>23.7</td>
<td>90</td>
<td>0</td>
<td>92</td>
</tr>
<tr>
<td>Opinion</td>
<td>58.3</td>
<td>21.2</td>
<td>95</td>
<td>10</td>
<td>95</td>
</tr>
<tr>
<td>Inservice</td>
<td>65.4</td>
<td>22.0</td>
<td>100</td>
<td>0</td>
<td>97</td>
</tr>
<tr>
<td>Atmosphere</td>
<td>71.7</td>
<td>22.2</td>
<td>100</td>
<td>0</td>
<td>96</td>
</tr>
<tr>
<td>Authority</td>
<td>60.3</td>
<td>23.9</td>
<td>100</td>
<td>5</td>
<td>94</td>
</tr>
<tr>
<td>Pressure</td>
<td>38.1</td>
<td>25.8</td>
<td>90</td>
<td>0</td>
<td>93</td>
</tr>
</tbody>
</table>

The intervention strategy principals found least effective when applied to Impediment 1 was legislative mandate. This strategy was
Impediment 2

In the research involving Impediment 2, the researcher wanted to determine which of the intervention strategies principals rated as most effective when a planned change was too complex for teachers to understand. In Table 14, these relationships are shown.

When a planned change is too complex for teachers to understand, principals rated inservice education (75.9) as the strategy that was most likely to help teachers accept the change. The only other strategy to rate higher than 60.0 on the scale was nonthreatening atmosphere (64.9). Principals indicated that teachers may try to implement a change, even if they do not understand it, if they do not have to fear punishment if they fail.

The intervention strategy principals found least effective when applied to Impediment 2 was legislative mandate. This strategy was given a rating of 29.2. This indicates that when all principal subgroups were considered together, legislative mandate was not regarded as an effective strategy for overcoming this impediment.

Impediment 3

In the research involving Impediment 3, the researcher wanted to determine which of the intervention strategies principals rated
Table 14

Responses of All Principals to Impediment 2, The Planned Change Is Too Complex for Those Expected to Implement the Change to Understand

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Mean</th>
<th>SD</th>
<th>Max.</th>
<th>Min.</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research</td>
<td>41.2</td>
<td>27.8</td>
<td>100</td>
<td>3</td>
<td>91</td>
</tr>
<tr>
<td>Legislative</td>
<td>29.2</td>
<td>26.8</td>
<td>100</td>
<td>0</td>
<td>90</td>
</tr>
<tr>
<td>Materials</td>
<td>45.0</td>
<td>21.4</td>
<td>90</td>
<td>5</td>
<td>86</td>
</tr>
<tr>
<td>Planning</td>
<td>55.7</td>
<td>25.2</td>
<td>100</td>
<td>5</td>
<td>90</td>
</tr>
<tr>
<td>Opinion</td>
<td>57.7</td>
<td>20.7</td>
<td>90</td>
<td>5</td>
<td>91</td>
</tr>
<tr>
<td>Inservice</td>
<td>75.9</td>
<td>20.6</td>
<td>100</td>
<td>5</td>
<td>94</td>
</tr>
<tr>
<td>Atmosphere</td>
<td>64.9</td>
<td>22.2</td>
<td>100</td>
<td>8</td>
<td>92</td>
</tr>
<tr>
<td>Authority</td>
<td>52.9</td>
<td>24.0</td>
<td>97</td>
<td>5</td>
<td>88</td>
</tr>
<tr>
<td>Pressure</td>
<td>31.1</td>
<td>22.3</td>
<td>90</td>
<td>0</td>
<td>91</td>
</tr>
</tbody>
</table>

as most effective when a planned change is perceived as being potentially disruptive because it may give students too much freedom. In Table 15, these relationships are shown.

When a planned change is perceived as disruptive because it may give students too much freedom, the intervention strategy preferred by principals was inservice education (65.9). Teachers who learn more about the change that may cause the perception that students may have too much freedom are more likely to accept the change.
Table 15
Responses of All Principals to Impediment 3, *The Planned Change Is Perceived as Disruptive Because It May Give Students Too Much Freedom*

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Mean</th>
<th>SD</th>
<th>Max.</th>
<th>Min.</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research</td>
<td>40.8</td>
<td>32.4</td>
<td>100</td>
<td>0</td>
<td>92</td>
</tr>
<tr>
<td>Legislative</td>
<td>28.2</td>
<td>26.8</td>
<td>100</td>
<td>0</td>
<td>90</td>
</tr>
<tr>
<td>Materials</td>
<td>41.6</td>
<td>21.4</td>
<td>95</td>
<td>5</td>
<td>89</td>
</tr>
<tr>
<td>Planning</td>
<td>54.2</td>
<td>24.2</td>
<td>95</td>
<td>0</td>
<td>90</td>
</tr>
<tr>
<td>Opinion</td>
<td>59.1</td>
<td>22.5</td>
<td>100</td>
<td>5</td>
<td>92</td>
</tr>
<tr>
<td>Inservice</td>
<td>65.9</td>
<td>22.5</td>
<td>100</td>
<td>5</td>
<td>92</td>
</tr>
<tr>
<td>Atmosphere</td>
<td>64.2</td>
<td>23.5</td>
<td>100</td>
<td>2</td>
<td>92</td>
</tr>
<tr>
<td>Authority</td>
<td>59.1</td>
<td>23.9</td>
<td>100</td>
<td>0</td>
<td>86</td>
</tr>
<tr>
<td>Pressure</td>
<td>38.1</td>
<td>24.9</td>
<td>97</td>
<td>0</td>
<td>92</td>
</tr>
</tbody>
</table>

The only other intervention strategy that principals rated higher than 60.0 was *nonthreatening atmosphere* (64.2). Principals indicated that teachers are more likely to attempt to implement a change when they know there will be no reprisals if they fail to implement the change properly.

The intervention strategy that principals found least effective when applied to Impediment 3 was *legislative mandate*. This strategy was given a rating of 28.2. This indicates that when all principal subgroups were considered together, legislative mandate was not regarded as an effective strategy for overcoming this impediment.
Impediment 4

In the research involving Impediment 4, the researcher wanted to determine which of the intervention strategies principals rated as most effective when a planned change is suspected to be a short-term educational fad. In Table 16, these relationships are shown.

Table 16

Responses of All Principals to Impediment 4, The Planned Change Is Suspected to Be a Short-Term Educational Fad

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Mean</th>
<th>SD</th>
<th>Max.</th>
<th>Min.</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research</td>
<td>43.0</td>
<td>30.1</td>
<td>100</td>
<td>0</td>
<td>95</td>
</tr>
<tr>
<td>Legislative</td>
<td>29.7</td>
<td>27.8</td>
<td>100</td>
<td>0</td>
<td>89</td>
</tr>
<tr>
<td>Materials</td>
<td>41.0</td>
<td>23.1</td>
<td>95</td>
<td>0</td>
<td>89</td>
</tr>
<tr>
<td>Planning</td>
<td>52.4</td>
<td>25.2</td>
<td>95</td>
<td>0</td>
<td>91</td>
</tr>
<tr>
<td>Opinion</td>
<td>53.5</td>
<td>23.5</td>
<td>100</td>
<td>5</td>
<td>91</td>
</tr>
<tr>
<td>Inservice</td>
<td>61.5</td>
<td>25.5</td>
<td>100</td>
<td>0</td>
<td>93</td>
</tr>
<tr>
<td>Atmosphere</td>
<td>62.0</td>
<td>23.6</td>
<td>100</td>
<td>10</td>
<td>90</td>
</tr>
<tr>
<td>Authority</td>
<td>53.7</td>
<td>24.5</td>
<td>100</td>
<td>5</td>
<td>92</td>
</tr>
<tr>
<td>Pressure</td>
<td>29.5</td>
<td>22.9</td>
<td>90</td>
<td>0</td>
<td>92</td>
</tr>
</tbody>
</table>

When a planned change is suspected by teachers of being a short-term educational fad, principals rated nonthreatening atmosphere (62.0) as the strategy they prefer for trying to eliminate this impediment to change. The low-risk atmosphere
created by a principal who does not punish teachers when they are not successful when risk taking was seen as the most effective way of negating the suspicion of teachers when a change is suspected to be just another fad.

The only other intervention strategy rated 60.0 or higher by principals was *inservice education* (61.5). Principals indicated that teaching teachers more about the planned change may help to persuade teachers to implement a change that they suspect to be a short-term fad.

The intervention strategy that principals found least effective when applied to Impediment 4 was *parental pressure for or against a change*. This strategy was given a rating of 29.5. This indicates that when all principal subgroups were considered together, parental pressure for or against a change was not regarded as an effective strategy for overcoming this impediment.

**Impediment 5**

In the research involving Impediment 5, the researcher wanted to determine which of the intervention strategies principals rated as most effective when a planned change makes teachers uncomfortable because it will change the way things have always been done in the school. In Table 17, these relationships are shown.

When a planned change makes teachers uncomfortable because it will alter the way things have always been done in the school, principals rated *nonthreatening atmosphere* (73.2) as the preferred
intervention strategy for overcoming this impediment to change. Principals indicated that when teachers do not fear punishment for taking a risk and failing, they are more willing to change the way things have traditionally been done in their school.

Table 17
Responses of All Principals to Impediment 5, The Planned Change Makes People Uncomfortable Because It Will Change the Way "It Has Always Been Done"

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Mean</th>
<th>SD</th>
<th>Max.</th>
<th>Min.</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research</td>
<td>48.6</td>
<td>26.4</td>
<td>100</td>
<td>0</td>
<td>98</td>
</tr>
<tr>
<td>Legislative</td>
<td>33.4</td>
<td>28.1</td>
<td>100</td>
<td>0</td>
<td>91</td>
</tr>
<tr>
<td>Materials</td>
<td>54.8</td>
<td>21.6</td>
<td>98</td>
<td>5</td>
<td>98</td>
</tr>
<tr>
<td>Planning</td>
<td>58.3</td>
<td>19.9</td>
<td>93</td>
<td>5</td>
<td>94</td>
</tr>
<tr>
<td>Opinion</td>
<td>63.3</td>
<td>20.9</td>
<td>95</td>
<td>5</td>
<td>93</td>
</tr>
<tr>
<td>Inservice</td>
<td>70.8</td>
<td>20.7</td>
<td>100</td>
<td>15</td>
<td>97</td>
</tr>
<tr>
<td>Atmosphere</td>
<td>73.2</td>
<td>21.3</td>
<td>100</td>
<td>10</td>
<td>95</td>
</tr>
<tr>
<td>Authority</td>
<td>64.4</td>
<td>21.9</td>
<td>100</td>
<td>10</td>
<td>92</td>
</tr>
<tr>
<td>Pressure</td>
<td>40.1</td>
<td>25.3</td>
<td>100</td>
<td>0</td>
<td>95</td>
</tr>
</tbody>
</table>

Other intervention strategies that principals rated at 60.0 or higher were inservice education (70.8), decentralized authority (64.4), and persuasion by opinion leaders (63.3). Principals rated inservice education very highly. They indicated that teachers who learn more about the planned change are more willing to accept a
change that will alter the traditional way things have been done in their school. Principals also rated decentralized authority highly. They indicated that site-based management, where teachers are responsible for suggesting and planning for change, would help to gain acceptance for a planned change, even when it changes the traditional mode of operation in the teachers' school. Principals rated persuasion by opinion leaders highly as a strategy for overcoming this impediment to change. They indicated that it was effective for teacher opinion leaders to help persuade other teachers to proceed with implementation of the change, even when it changes the traditional mode of operation in the teachers' school.

The strategy that principals found to be least effective when applied to Impediment 5 was legislative mandate. This strategy was given a rating of 33.4. This indicates that when all principal subgroups were considered together, legislative mandate was not regarded as effective in overcoming this impediment.

Impediment 6

In the research involving Impediment 6, the researcher wanted to determine which of the intervention strategies principals rated as most effective when a planned change may upset teacher labor groups and cause a "change in the condition of employment" and presents contract problems. In Table 18, these relationships are shown.
Table 18
Responses of All Principals to Impediment 6, The Planned Change May Upset Teacher Labor Groups and Cause a "Change in the Condition of Employment" and Presents Contract Problems

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Mean</th>
<th>SD</th>
<th>Max.</th>
<th>Min.</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research</td>
<td>32.2</td>
<td>28.3</td>
<td>100</td>
<td>0</td>
<td>91</td>
</tr>
<tr>
<td>Legislative</td>
<td>41.9</td>
<td>32.8</td>
<td>100</td>
<td>0</td>
<td>93</td>
</tr>
<tr>
<td>Materials</td>
<td>37.7</td>
<td>23.6</td>
<td>90</td>
<td>0</td>
<td>88</td>
</tr>
<tr>
<td>Planning</td>
<td>49.9</td>
<td>22.5</td>
<td>100</td>
<td>7</td>
<td>92</td>
</tr>
<tr>
<td>Opinion</td>
<td>68.2</td>
<td>37.1</td>
<td>95</td>
<td>10</td>
<td>92</td>
</tr>
<tr>
<td>Inservice</td>
<td>55.4</td>
<td>24.4</td>
<td>100</td>
<td>0</td>
<td>91</td>
</tr>
<tr>
<td>Atmosphere</td>
<td>67.3</td>
<td>24.0</td>
<td>100</td>
<td>5</td>
<td>91</td>
</tr>
<tr>
<td>Authority</td>
<td>58.6</td>
<td>26.0</td>
<td>100</td>
<td>0</td>
<td>88</td>
</tr>
<tr>
<td>Pressure</td>
<td>35.0</td>
<td>26.7</td>
<td>90</td>
<td>0</td>
<td>92</td>
</tr>
</tbody>
</table>

When a planned change may upset teacher labor groups and cause a "change in the condition of employment" and presents contract problems, principals rated persuasion by opinion leaders (68.2) as the most effective strategy for overcoming this impediment. Principals indicated that it helped for teacher opinion leaders to be in favor of implementing a planned change because they could effectively persuade teachers to proceed with the implementation.

Principals also rated nonthreatening atmosphere (67.3) higher than 60.0. They indicated that a low-risk atmosphere where teachers
did not have to fear failure in their school would help teachers accept planned change even when it might cause some contractual problems.

The intervention strategy that principals found least effective when applied to Impediment 6 was *research-based studies*. This strategy was given a rating of 32.1. This indicates that when all principal subgroups were considered together, research-based studies were not regarded as an effective strategy for overcoming this impediment.

**Impediment 7**

In the research involving Impediment 7, the researcher wanted to determine which of the intervention strategies principals rated as most effective when a planned change may require teachers to get training outside of regular school day hours. In Table 19, these relationships are shown.

When a planned change may require teachers to get training on their own time, outside of regular school hours, principals rated *inservice education* (64.6) as the preferred strategy for overcoming this impediment to change. Principals indicated that instructing teachers about planned change before attempting implementation may help teachers accept the change.

Other strategies that principals rated higher than 60.0 were *nonthreatening atmosphere* (62.6) and *persuasion by opinion leaders* (61.4). Principals indicated that an atmosphere where teachers know
they will not be punished for risk taking that fails will help teachers to accept getting training on their own time.

Table 19

Responses of All Principals to Impediment 7, The Planned Change May Require Those Responsible for Implementing the Change to Get Training on Their "Own Time," Outside of Regular School Day Hours

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Mean</th>
<th>SD</th>
<th>Max.</th>
<th>Min.</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research</td>
<td>40.6</td>
<td>27.5</td>
<td>100</td>
<td>0</td>
<td>88</td>
</tr>
<tr>
<td>Legislative</td>
<td>43.4</td>
<td>57.3</td>
<td>95</td>
<td>0</td>
<td>88</td>
</tr>
<tr>
<td>Materials</td>
<td>50.1</td>
<td>24.0</td>
<td>100</td>
<td>0</td>
<td>84</td>
</tr>
<tr>
<td>Planning</td>
<td>50.4</td>
<td>23.1</td>
<td>100</td>
<td>0</td>
<td>87</td>
</tr>
<tr>
<td>Opinion</td>
<td>61.4</td>
<td>22.4</td>
<td>100</td>
<td>10</td>
<td>88</td>
</tr>
<tr>
<td>Inservice</td>
<td>64.6</td>
<td>25.2</td>
<td>100</td>
<td>5</td>
<td>87</td>
</tr>
<tr>
<td>Atmosphere</td>
<td>62.6</td>
<td>27.7</td>
<td>100</td>
<td>5</td>
<td>85</td>
</tr>
<tr>
<td>Authority</td>
<td>58.8</td>
<td>26.4</td>
<td>100</td>
<td>5</td>
<td>82</td>
</tr>
<tr>
<td>Pressure</td>
<td>29.1</td>
<td>24.0</td>
<td>95</td>
<td>0</td>
<td>87</td>
</tr>
</tbody>
</table>

Principals also rated persuasion by opinion leaders as an effective way for overcoming this impediment. Principals indicated that it helped for teacher opinion leaders to be in favor of implementing a planned change that would require teachers to get trained on their own time, outside of regular school hours.
The intervention strategy that principals found to be least effective when applied to Impediment 7 was parental pressure for or against a change. This strategy was given a rating of 29.2. This indicates that when all principal subgroups were considered together, parental pressure for or against a change was not regarded as an effective strategy for overcoming this impediment.

**Impediment 8**

In the research involving Impediment 8, the researcher wanted to determine which of the intervention strategies principals rated as most effective when a planned change is being impeded by misunderstandings between the principal and the teachers. In Table 20, these relationships are shown.

When planned change is being impeded by misunderstandings between the principal and the teachers, principals rated nonthreatening atmosphere (74.8) as the preferred strategy for overcoming this impediment to change. Principals indicated that an atmosphere where teachers know they will not be punished if things do not go as planned will help to gain acceptance when planned change is being impeded by misunderstandings between the principal and the teachers.

Other strategies rated higher than 60.0 by principals when teachers and principals have misunderstandings about the planned change were persuasion by opinion leaders (65.7), inservice education (65.2), and decentralized authority (63.2). Principals indicated that when a change is being impeded by misunderstandings
between teachers and the principal, persuasion by opinion leaders can be effective in overcoming this impediment. Principals indicated that it does help for teacher opinion leaders to be in favor of implementing a planned change where there is confusion.

Table 20
Responses of All Principals to Impediment 8, The Planned Change Is Being Impeded by Misunderstandings Between the Principal and Those Expected to Implement the Change

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Mean</th>
<th>SD</th>
<th>Max.</th>
<th>Min.</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research</td>
<td>35.7</td>
<td>27.9</td>
<td>100</td>
<td>0</td>
<td>89</td>
</tr>
<tr>
<td>Legislative</td>
<td>35.0</td>
<td>27.6</td>
<td>100</td>
<td>0</td>
<td>86</td>
</tr>
<tr>
<td>Materials</td>
<td>41.0</td>
<td>20.3</td>
<td>90</td>
<td>0</td>
<td>85</td>
</tr>
<tr>
<td>Planning</td>
<td>56.3</td>
<td>22.7</td>
<td>95</td>
<td>5</td>
<td>92</td>
</tr>
<tr>
<td>Opinion</td>
<td>65.7</td>
<td>23.9</td>
<td>100</td>
<td>10</td>
<td>93</td>
</tr>
<tr>
<td>Inservice</td>
<td>65.2</td>
<td>23.5</td>
<td>100</td>
<td>2</td>
<td>90</td>
</tr>
<tr>
<td>Atmosphere</td>
<td>74.8</td>
<td>24.1</td>
<td>100</td>
<td>5</td>
<td>92</td>
</tr>
<tr>
<td>Authority</td>
<td>63.2</td>
<td>24.5</td>
<td>100</td>
<td>10</td>
<td>90</td>
</tr>
<tr>
<td>Pressure</td>
<td>31.5</td>
<td>23.7</td>
<td>95</td>
<td>0</td>
<td>88</td>
</tr>
</tbody>
</table>

Principals also rated inservice education as an effective method of overcoming misunderstandings between the teachers and the principal about a planned change. A rating of 65.2 showed that principals thought that educating teachers about the change would help reduce the amount of misunderstanding between teachers and the
principal. Principals rated decentralized authority (63.3) as being effective in helping to reduce misunderstanding between teachers and the principal when attempting to implement a planned change. Principals indicated that site-based management, where teachers are responsible for suggesting and planning for change, would help gain acceptance for the planned change hampered by this impediment.

The intervention strategy that principals found least effective when applied to Impediment 8 was parental pressure for or against a change. This strategy was given a rating of 31.5. This indicates that when all principal subgroups were considered together, parental pressure for or against a change was not regarded as an effective strategy for overcoming this impediment.

**Impediment 9**

In the research involving Impediment 9, the researcher wanted to determine which of the intervention strategies principals rated as most effective when a planned change is being resisted by teachers because it is being opposed by parents who see it as a change from the traditional challenges of their own education or from the moral values of the community. In Table 21, these relationships are shown.

When a planned change is being resisted by teachers because it is being opposed by parents who see it as a change from the traditional challenges of their own education or from the moral values of the community, principals rated persuasion by opinion
leaders (63.9) as the preferred strategy for overcoming this impediment to change. Principals indicated that it helps for teacher opinion leaders to be in favor of implementing a planned change when parents oppose the change because it differs from their moral values or their own educational experiences.

Table 21

Responses of All Principals to Impediment 9, The Planned Change Is Being Opposed by Parents Who See It as a Change From the Traditional Challenges of Their Own Education or From the Moral Values of the Community

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Mean</th>
<th>SD</th>
<th>Max.</th>
<th>Min.</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research</td>
<td>46.4</td>
<td>27.2</td>
<td>100</td>
<td>0</td>
<td>90</td>
</tr>
<tr>
<td>Legislative</td>
<td>48.8</td>
<td>31.5</td>
<td>100</td>
<td>0</td>
<td>87</td>
</tr>
<tr>
<td>Materials</td>
<td>46.8</td>
<td>28.6</td>
<td>100</td>
<td>0</td>
<td>88</td>
</tr>
<tr>
<td>Planning</td>
<td>52.3</td>
<td>23.1</td>
<td>93</td>
<td>5</td>
<td>89</td>
</tr>
<tr>
<td>Opinion</td>
<td>63.9</td>
<td>21.0</td>
<td>100</td>
<td>10</td>
<td>88</td>
</tr>
<tr>
<td>Inservice</td>
<td>63.9</td>
<td>22.3</td>
<td>100</td>
<td>10</td>
<td>90</td>
</tr>
<tr>
<td>Atmosphere</td>
<td>63.6</td>
<td>24.5</td>
<td>100</td>
<td>5</td>
<td>89</td>
</tr>
<tr>
<td>Authority</td>
<td>55.8</td>
<td>23.9</td>
<td>100</td>
<td>0</td>
<td>87</td>
</tr>
<tr>
<td>Pressure</td>
<td>46.8</td>
<td>28.7</td>
<td>98</td>
<td>0</td>
<td>83</td>
</tr>
</tbody>
</table>

Other intervention strategies rated higher than 60.0 by principals when parents are opposed to a planned change because of differences from their moral values or their own educational experiences.
experiences were inservice education (63.9) and nonthreatening atmosphere (63.6).

Principals rated inservice education (63.9) as an effective method for overcoming this impediment to change. They indicated that educating teachers about a planned change helps teachers accept the change when it is being challenged by parents because it differs from their moral values or their own educational experiences.

Principals also rated nonthreatening atmosphere (63.6) as an effective method for overcoming this impediment to change. They indicated that an atmosphere where teachers know they will not be punished if things do not go as planned would help teachers accept a change when it is being challenged by parents because it differs from their moral values or their own educational experiences.

The intervention strategy that principals found least effective when applied to Impediment 9 was research-based studies. This strategy was given a rating of 46.4. This indicates that when all principal subgroups were considered together, research-based studies were not regarded as an effective strategy for overcoming this impediment.
Impediment 10

In the research involving Impediment 10, the researcher wanted to determine which of the intervention strategies principals rated as most effective when a planned change seems doomed to failure due to a lack of support from the superintendent and the board of education. In Table 22, these relationships are shown.

When a planned change is being resisted by teachers because it seems doomed to failure because of lack of support from the board of education and the superintendent, principals rated persuasion by opinion leaders (61.3) as the most effective strategy for overcoming this impediment to change. Principals indicated that it helped for teacher opinion leaders to favor the implementation of a planned change when the change seems doomed to failure due to a lack of support by the board and the superintendent.

Other intervention strategies rated higher than 60.0 by principals when the change seems doomed to failure due to a lack of support from the board and superintendent were decentralized authority (60.9) and parental pressure for a change (60.3).

Principals rated decentralized authority (60.9) highly as an intervention strategy when the plan seems doomed to failure due to a lack of support from the superintendent and school board. Principals indicated that site-based management, where teachers are also responsible for suggesting and planning for change, would help
teachers accept the planned change, even if the superintendent and board do not support it.

Table 22
Responses of All Principals to Impediment 10, *The Planned Change Seems Doomed to Failure Due to a Lack of Support From the Superintendent and the Board of Education*

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Mean</th>
<th>SD</th>
<th>Max.</th>
<th>Min.</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research</td>
<td>48.6</td>
<td>32.4</td>
<td>100</td>
<td>0</td>
<td>89</td>
</tr>
<tr>
<td>Legislative</td>
<td>54.4</td>
<td>36.6</td>
<td>100</td>
<td>0</td>
<td>89</td>
</tr>
<tr>
<td>Materials</td>
<td>39.0</td>
<td>24.7</td>
<td>95</td>
<td>0</td>
<td>89</td>
</tr>
<tr>
<td>Planning</td>
<td>51.8</td>
<td>24.7</td>
<td>100</td>
<td>0</td>
<td>88</td>
</tr>
<tr>
<td>Opinion</td>
<td>61.3</td>
<td>24.1</td>
<td>199</td>
<td>7</td>
<td>87</td>
</tr>
<tr>
<td>Inservice</td>
<td>53.5</td>
<td>24.5</td>
<td>95</td>
<td>0</td>
<td>87</td>
</tr>
<tr>
<td>Atmosphere</td>
<td>54.8</td>
<td>28.8</td>
<td>100</td>
<td>0</td>
<td>88</td>
</tr>
<tr>
<td>Authority</td>
<td>60.9</td>
<td>27.5</td>
<td>100</td>
<td>5</td>
<td>88</td>
</tr>
<tr>
<td>Pressure</td>
<td>60.3</td>
<td>30.0</td>
<td>100</td>
<td>0</td>
<td>92</td>
</tr>
</tbody>
</table>

Principals also rated *parental pressure for a change* (60.3) highly as an intervention strategy when the planned change seems doomed to failure due to a lack of support from the superintendent and the board of education. Principals indicated that if pressure is being exerted by parent groups for the change, teachers are more likely to accept the planned change even if the superintendent and board do not support the change.
The intervention strategy that principals found to be least effective when applied to Impediment 10 was *new materials*. This strategy was given a rating of 39.0. This indicates that when all principal subgroups were considered together, new materials were not regarded as an effective strategy for overcoming this impediment.

Discussion, Interpretation, and Evaluation

In Chapter IV, the results of the data analyses were reported. The data that were reported helped to answer the two research questions:

1. How do elementary, middle school, and high school principals rate selected, planned change intervention strategies as they apply to specific impediments to planned change?

2. Are there significant differences in the ratings for selected planned change intervention strategies, as they apply to impediments to planned change, when the ratings of elementary, middle school, and high school principals are compared?

For Research Question 1, the researcher attempted to determine whether there were differences (at the .05 alpha level) between the levels of principals (elementary, middle school, and high school) when the independent variables, change intervention strategies, were applied to the dependent variables, impediments to change. Only 7 of the 90 ANOVAs showed a difference. Table 23 lists the seven cases where a difference was found, using the .05 alpha level.
Table 23
ANOVA for Impediments That Showed a Difference at the .05 Alpha Level

<table>
<thead>
<tr>
<th>Impediment</th>
<th>Strategy</th>
<th>p Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Educational fad</td>
<td>Research</td>
<td>.004</td>
</tr>
<tr>
<td>6. Upset labor groups</td>
<td>Legislative</td>
<td>.035</td>
</tr>
<tr>
<td>6. Upset labor groups</td>
<td>Planning</td>
<td>.009</td>
</tr>
<tr>
<td>7. Training on own time</td>
<td>Research</td>
<td>.010</td>
</tr>
<tr>
<td>7. Training on own time</td>
<td>Materials</td>
<td>.009</td>
</tr>
<tr>
<td>8. Misunderstandings</td>
<td>Planning</td>
<td>.039</td>
</tr>
<tr>
<td>10. No support from board/supt.</td>
<td>Planning</td>
<td>.027</td>
</tr>
</tbody>
</table>

The findings described above indicate that elementary school, middle school, and high school principal subgroups probably can use the same intervention strategies for overcoming impediments to change without regard for the differences in the types of school buildings.

For each impediment to change considered in Research Question 2, the means for each of the intervention strategies were compared. The most effective strategies were detailed earlier in this chapter. It is interesting that the strategies that were rated as most effective were consistent throughout the 10 impediments.

The rankings of the nine intervention strategies for the 10 impediments are given in Table 24. This table was constructed by
compiling the ranked positions of the intervention strategies for each impediment to change when all three principal subgroups were considered together. For instance, persuasion by opinion leaders ranked first for three strategies, second for one strategy, third for three strategies, and fourth for three strategies.

Table 24

Rankings of Intervention Strategies by Position, Using Average Means of Principals From All Three Subgroups

<table>
<thead>
<tr>
<th>Strategy</th>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
<th>4th</th>
<th>5th</th>
<th>6th</th>
<th>7th</th>
<th>8th</th>
<th>9th</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Legislative</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Materials</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>6</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Planning</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>8</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Opinion</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Inservice</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Atmosphere</td>
<td>4</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Authority</td>
<td>0</td>
<td>1</td>
<td>5</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Pressure</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>4</td>
<td>3</td>
</tr>
</tbody>
</table>

Using the position rankings listed in Table 24, the average ranking of nonthreatening atmosphere would seem to indicate that it might be the best overall strategy for overcoming the impediments to
change included in this study. Similarly, it would seem that legislative mandate is the least effective of the strategies for overcoming the impediments to change included in this study.

Average rankings for the nine intervention strategies are listed in Table 25. This table was generated by multiplying the numbers for each strategy in Table 24 by its ranking, adding them together, and then dividing by 10. For example, for opinion, \((1 \times 3) + (2 \times 1) + (3 \times 3) + (4 \times 3)\) divided by 10 = 2.6.

Table 25

<table>
<thead>
<tr>
<th>Ranking</th>
<th>Strategy</th>
<th>Average Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Atmosphere</td>
<td>1.9</td>
</tr>
<tr>
<td>2</td>
<td>Inservice</td>
<td>2.4</td>
</tr>
<tr>
<td>3</td>
<td>Opinion</td>
<td>2.6</td>
</tr>
<tr>
<td>4</td>
<td>Authority</td>
<td>3.4</td>
</tr>
<tr>
<td>5</td>
<td>Planning</td>
<td>5.1</td>
</tr>
<tr>
<td>6</td>
<td>Materials</td>
<td>6.7</td>
</tr>
<tr>
<td>7</td>
<td>Research</td>
<td>7.6</td>
</tr>
<tr>
<td>7</td>
<td>Pressure</td>
<td>7.6</td>
</tr>
<tr>
<td>9</td>
<td>Legislative</td>
<td>8.4</td>
</tr>
</tbody>
</table>

A natural break occurred both before and after long- and short-term planning for change. The four strategies that ranked higher
than long- and short-term planning were tightly bunched, with an interval of 1.5 from nonthreatening atmosphere (1.9) to decentralized authority (3.4). After long- and short-term planning, there was an interval of only 1.7 from new materials (6.7) to legislative mandate (8.4). This natural break would allow one to speculate that strategies ranked 1 through 4 were effective strategies for the impediments to change studied in this research, and that strategies ranked 6 through 9 were ineffective strategies for the impediments to change studied in this research.

Chapter Summary

The findings of this research project were reported in Chapter IV. This researcher was concerned with two central research questions: (1) Are there differences in the ratings for selected planned change intervention strategies, as they apply to impediments to planned change, when the ratings of elementary, middle school, and high school principals are compared? and (2) How do elementary, middle school, and high school principals from Michigan rate selected planned change intervention strategies as they apply to specific impediments to change? The chapter was organized in four sections: introduction; a report of the findings for Research Question 1 and Research Question 2; discussion, interpretation, and evaluation; and the chapter summary.

The researcher coded the data that were gathered during the mailed questionnaire process and took them to Western Michigan
University's statistical department. The data were then processed on the VAX computer system using SPSS software, according to the researcher's specifications described in Chapter III of this research report.

Using this statistical program, means were computed for each intervention strategy for each impediment to planned change. In addition, 90 ANOVAs were completed, at the .05 alpha level, to determine whether there were differences in the responses of elementary school, middle school, and high school principals. The results of these analyses were used in answering Research Question 1. Of the 90 ANOVAs that were performed, only 7 indicated differences between groups at the .05 alpha level.

For Impediment 4, the strategy research-based studies was found to have a p value of .004. In this case, the ratings of elementary principals differed from those of middle school and high school principals, but no other differences were found.

For Impediment 6, the strategy legislative mandate was found to have a p value of .035. In this case, the ratings of elementary principals differed from those of middle school principals; no other differences were found.

For Impediment 6, the strategy long- and short-term planning was found to have a p value of .009. In this case, the ratings of middle school principals differed from those of elementary and high school principals; no other differences were noted.
For Impediment 7, the strategy *research-based studies* was found to have a $p$ value of .010. In this case, the ratings of elementary school principals differed from those of high school principals; no other differences were noted.

For Impediment 7, the strategy *new materials* was found to have a $p$ value of .009. In this case, the ratings of elementary school principals differed from those of high school principals; no other differences were noted.

For Impediment 8, the strategy *long- and short-term planning* was found to have a $p$ value of .040. In this case, the ratings of middle school principals differed from those of high school principals; no other differences were found.

For Impediment 10, the strategy *long- and short-term planning* was found to have a $p$ value of .027. In this case, the ratings of middle school principals differed from those of high school principals; no other differences were found.

For Research Question 1, when the 90 ANOVAs were computed, only the seven cases noted above were found to be different at the .05 level. This means that only 7.7% of the cases were found to be different. According to Isaac and Michael (1989), one would expect 5% to vary by chance alone.

For Research Question 2, for each impediment, the means for effectiveness were calculated when the intervention-strategy variables (*research-based studies, legislative mandate, purchase of new materials, long- and short-term planning, persuasion by opinion*...
leaders, inservice education, nontthreatening atmosphere, decentralized authority, and parental pressure for or against change) were considered.

For each impediment, the strategy with the highest mean, as well as other strategies with average means of 60.0 or above, was noted. Also noted were the least effective strategies (those with the lowest means) as identified by the principal subgroups. For each impediment, intervention strategies with ratings of 60.0 or higher were as follows:

**Impediment 1** (Change causes undesirable changes in job roles)
- Nonthreatening atmosphere (71.65)
- Inservice education (65.40)
- Decentralized authority (60.32)

**Impediment 2** (Change is too complex to understand)
- Inservice education (75.89)
- Nonthreatening atmosphere (64.88)

**Impediment 3** (Change may be disruptive)
- Inservice education (65.87)
- Nonthreatening atmosphere (64.21)

**Impediment 4** (Change may be short-term fad)
- Nonthreatening atmosphere (62.0)
- Inservice education (61.51)

**Impediment 5** (Changes the way things have always been done)
- Nonthreatening atmosphere (73.23)
- Inservice education (70.82)
Decentralized authority (64.37)
Persuasion by opinion leaders (63.28)

**Impediment 6** (Change may upset labor groups)
Persuasion by opinion leaders (68.18)
Nonthreatening atmosphere (67.33)

**Impediment 7** (Change may cause training on own time)
Inservice education (64.55)
Nonthreatening atmosphere (62.61)
Persuasion by opinion leaders (61.41)

**Impediment 8** (Change being impeded by misunderstandings)
Nonthreatening atmosphere (74.82)
Persuasion by opinion leaders (65.70)
Inservice education (65.22)
Decentralized authority (63.19)

**Impediment 9** (Change being opposed by parents)
Persuasion by opinion leaders (63.91)
Inservice education (63.88)
Nonthreatening atmosphere (63.61)

**Impediment 10** (Change not supported by superintendent/board)
Persuasion by opinion leaders (61.30)
Decentralized authority (60.91)
Parental pressure for or against change (60.26)

In the discussion, interpretation, and evaluation section of Chapter IV, Research Question 2 was discussed in terms of which strategies, based on the data, appeared to be most effective. The
rankings for each strategy were compiled in Table 24. Those numerical rankings were translated to an average rank in Table 25. It was noted that nonthreatening atmosphere, ranked first, with an average rank of 1.9; inservice education, ranked second, with an average rank of 2.4; persuasion by opinion leaders, ranked third, with an average rank of 2.6; and decentralized authority, ranked fourth, with an average rank of 3.4, seemed to be the most effective overall strategies for overcoming the 10 impediments to change that were considered in this study.

In Chapter V a summary of this research project is given, along with the researcher's conclusions and recommendations.
CHAPTER V

CONCLUSIONS, RECOMMENDATIONS, AND IMPLICATIONS

Overview

In this research project, the researcher attempted to determine whether there were any differences in how elementary school, middle school, and high school principals tried to overcome common impediments to change. The researcher also attempted to determine whether public school principals in Michigan have preferred strategies for overcoming these impediments to planned change. The purpose of this chapter is to discuss conclusions based on the findings, to make recommendations based on the conclusions, and to suggest implications for further research.

Conclusions

The conclusions from this study are presented in the order in which the research questions were asked.

Research Question 1

When trying to draw conclusions about Research Question 1, Are there differences in the ratings for selected planned change intervention strategies, as they apply to impediments to planned change, when the ratings of elementary, middle school, and high
school principals are compared? the researcher first looked at the number of differences that were found. In this research, in which the .05 alpha level was chosen to determine possible differences, only seven comparisons were found in which differences existed.

The conclusion regarding Research Question 1 is that there were few differences in how principals in the three subgroups (elementary, middle school, and high school) rated the intervention strategies. Principals at all three levels tended to use the same intervention strategies when attempting to overcome impediments to change.

This conclusion could be important to principals from all three subgroups because the data indicated that the principals do not need to worry about which strategy is most appropriate for their subgroup. The data seemed to show that a given strategy will be equally effective, regardless of the subgroup to which the principal belongs.

Research Question 2

When trying to draw conclusions regarding Research Question 2, Which are the preferred strategies for overcoming impediments to change? it might be helpful to put some perspective on the possible effectiveness of the most highly rated intervention strategy for each impediment to change. Mean ratings for the highest-rated strategy for each impediment ranged from 75.89 on the high side to 61.30 on the low side. This is a large range of effectiveness and
indicates that intervention strategies rated as most effective will likely have a varying range of effectiveness. In this conclusion section, an attempt has been made to categorize the highest-rated strategies into ranges of highly effective (70.0+), moderately effective (65.0 to 69.9), and marginally effective (60.0 to 64.9).

1. For Impediment 1, The planned change causes those responsible for implementing the change to believe it may cause undesirable changes in their jobs, a nonthreatening atmosphere was rated as the intervention strategy that works best for reducing this impediment. The mean rating of 71.65 represents a very high score and indicates that this might be a highly effective response to this impediment.

2. For Impediment 2, The planned change is too complex, for those expected to implement the change, to understand, inservice education was rated as the intervention strategy that works best for reducing this impediment. The mean rating of 75.89 represents a very high score and indicates that this might be a highly effective response to this impediment.

3. For Impediment 3, The planned change is perceived as disruptive because it may give students too much freedom, inservice education was rated as the intervention strategy that works best for reducing this impediment. The mean rating of 65.87 represents a moderately high score and indicates that this might be a moderately effective response to this impediment.
4. For Impediment 4, The planned change is suspected to be a short-term educational fad, nonthreatening atmosphere was rated as the intervention strategy that works best for reducing this impediment. The mean rating of 62.00 represents a marginally high score and indicates that this might be a marginally effective response to this impediment.

5. For Impediment 5, The planned change makes people uncomfortable because it will change the way "it has always been done," a nonthreatening atmosphere was rated as the intervention strategy that works best for reducing this impediment. The mean rating of 73.23 represents a very high score and indicates that this might be a highly effective response to this impediment.

6. For Impediment 6, The planned change may upset labor groups and cause a "change in the condition of employment" and presents contract problems, persuasion by opinion leaders was rated as the intervention strategy that works best for reducing this impediment. The mean rating of 68.18 represents a moderately high score and indicates that this might be a moderately effective response to this impediment.

7. For Impediment 7, The planned change may require those responsible for implementing the change to get training on their own time," outside of regular school day hours, inservice education was rated as the intervention strategy that works best for reducing this impediment. The mean rating of 64.55 represents a marginally
high score and indicates that this might be a marginally effective response to this impediment.

8. For Impediment 8, The planned change is being impeded by misunderstandings between the principal and those expected to implement the change, a nonthreatening atmosphere was rated as the intervention strategy that works best for reducing this impediment. The mean score of 74.82 represents a very high score and indicates that this might be a highly effective response to this impediment.

9. For Impediment 9, The planned change is being opposed by parents who see it as a change from the traditional challenges of their own education or from the moral values of the community, persuasion by opinion leaders was rated as the intervention strategy that works best for reducing this impediment. The mean rating of 63.91 represents a marginally high score and indicates that this might be a marginally effective response to this impediment.

10. For Impediment 10, The planned change seems doomed to failure due to a lack of support from the superintendent and the board of education, persuasion by opinion leaders was rated as the intervention strategy that works best for reducing this impediment. The mean score of 61.30 represents a marginally high score and indicates that this might be a marginally effective response to this impediment.

The conclusions drawn from these data could be very useful to principals. The data indicate which of the strategies will most likely be effective in overcoming a given impediment to change.
This information may be critical for the principal wishing to overcome certain impediments to the change process.

Recommendations

Principals in Michigan have made it fairly clear through this research that they believe it is possible to overcome impediments to planned change by using selected intervention strategies. Principals should pay attention to the findings of this survey to try to put into place in their buildings the kind of structure that will allow the recommended intervention strategies to exist.

Principals must create an atmosphere in their buildings where teachers are free to take risks. The number-one strategy chosen over all of the impediments is a nonthreatening atmosphere. Principals recognize this strategy works effectively, so they, the principals, must work with their teaching staffs to create a culture in their buildings where risk taking is rewarded and not punished, where risk taking becomes normal.

It is also clear that inservice education is an important component of getting change accepted in schools in Michigan. Principals must make this realization clear to their superintendents and boards of education. Principals have said that teachers will work toward change if they have the skills to do so. Principals, superintendents, and boards of education must make sure that appropriate professional development is available to teachers before, during, and after the wished-for change is implemented.
Persuasion by opinion leaders is also an important facet of the change process. Principals have indicated that the opinion leader in a building can make a change work even if there is resistance to it. This information must be used to the change agent’s advantage as change is being sought. The politics of the change must be addressed.

Principals must also begin to let go of some of the authority that they have over control of their buildings. The data indicate that principals believe that teachers will work to overcome change if they have shared decision making in their buildings.

Principals also should be aware of what their peers say does not work when trying to overcome impediments to change. Less effective techniques like relying on legislative mandates, parental pressure, citing research-based studies, and buying new materials are not very effective when trying to get change instituted in a school building. When trying to implement change, principals should stick to what works and quit relying on some of the old stand-by strategies that that data indicate do not work.

The literature that is available today is clear on the role of the principal (Barth, 1976; Smith & Andrews, 1989). Although that role appears to be changing with site-based management and shared decision making, principals are still the main practitioners of change in public education in Michigan. If change in the nation’s schools is to occur, and educators are under growing pressure to see that it does (National Commission on Excellence in Education, 1983),
kindergarten through 12th-grade principals must be out front leading the charge, taking risks.

Not only must principals see to it that change occurs, but they must make sure that the change is positive and a change for the better. This time, education must look past the old models that have been built from in the past. This time, educators must look at preparing all children for the future, not just the 40% who will go on to a 4-year college or university. The next few years may be the last chance public education gets to improve and make education better for all children before the education of America's children is snatched from the public sector and taken over by the private sector.

Implications for Further Research

This research project has opened up several interesting questions that might be implications for future research. One such item evolved from Research Question 1. In this question, only seven subgroup differences were found, at the .05 alpha level, in how principals rated the intervention strategies. This leaves 83 ANOVAs in which no differences were found. Future researchers might try to determine why no differences were found in those 83 cases.

Another area that presents implications for further research would be to do the same type of study with principals from different types of schools other than those that were studied in this research project. Principals from vocational schools, alternative schools,
and private schools could also be surveyed to determine their ratings of these intervention strategies.

Those strategies that were identified as being effective by the principal subgroups present another area for further research. In this study, nonthreatening atmosphere, inservice education, persuasion by opinion leaders, and decentralized authority were identified as being effective in overcoming impediments to change. Future research may be designed, in which the investigator would attempt to determine why these strategies were rated as being effective.

Another interesting area to examine as an implication for further research would be conducting this same study from different perspectives. One such perspective would be that of teachers. Another might be that of different gender and cultural subgroups, or subgroups such as degreed individuals (M.A., Ed.S., or Ed.D holders).

Chapter Summary

In Chapter V, the researcher offered conclusions about the data that were gathered and analyzed, proposed recommendations that educators might wish to follow, and presented several implications for further research.

The conclusions section of this chapter was divided into two sections. The first section dealt with Research Question 1. In this section it was determined that only seven differences, using
the .05 alpha level, were found between principal subgroup ratings for the 90 cases that were tested. The second section dealt with Research Question 2. In this section, the ratings of the principal subgroups were listed, along with the ratings of the subgroups when considered together. In this section, the data indicated that, on the average, nonthreatening atmosphere, inservice education, persuasion by opinion leaders, and decentralized authority were the most highly rated strategies.

In the recommendations section of Chapter V, the researcher indicated that principals would be wise to note that, in most cases, nonthreatening atmosphere, inservice education, persuasion by opinion leaders, and decentralized authority were effective in dealing with impediments to change. It was also noted that principals should be aware that legislative mandates, parental pressure, research-based studies, and new materials were less effective strategies when trying to overcome impediments to change.

Several implications for further research were offered by the researcher. Some of these implications were as follows: Try to determine why no differences were found in 83 of the ANOVAs tested, conduct the same research on different principal groups, take a closer look at the intervention strategies that were found to be effective, and conduct the same research on teachers and other subgroups.

Finally, through the differences discussed in Chapter V, as well as the preferred strategies for overcoming impediments to
change, principals should be better able to overcome or diminish the effects of impediments to change in their buildings.
November 25, 1991

Dear Lloyd:

Enclosed is a copy of the survey I will be sending to principals to complete my doctoral studies. Included with the survey are a letter of introduction, definitions of intervention strategies, and instructions for the survey’s completion. This survey is designed to ask principals which strategies they think work best in overcoming, reducing, or eliminating impediments or obstacles to change in the kindergarten through twelfth grade educational setting.

Please take a few minutes to look over the survey packet. After reviewing the packet and completing the survey, I would appreciate any comments you may have regarding ways to make the survey materials more understandable or more easy to complete.

I appreciate your cooperation. Please return this survey, with your comments attached by December 3rd, to your superintendent.

Sincerely,

Dale Kimball
Dear Colleague:

I am a doctoral candidate in Educational Leadership at Western Michigan University in Kalamazoo, Michigan. As a part of my dissertation, I am collecting data from principals in the State of Michigan. The enclosed survey questionnaire is designated to collect data from practicing elementary, middle, and high school principals. From this data, I hope to determine strategies which will help principals who are faced with obstacles when they try to implement planned change in their buildings.

You were selected for inclusion in this study by means of a proportional stratified sample of Michigan principals from the Michigan Educational Directory, 1991 edition. A coding procedure has been utilized solely for my benefit in collecting responses; however, your responses will be held in strict confidence. Your responses will not be analyzed or reported individually, as the process I am employing utilizes group response, not individual response, data for survey items.

I realize your time is extremely valuable, so I have attempted to make this survey instrument as brief and understandable as possible. It should only take about fifteen minutes to complete the following steps. First, read the directions on the survey. Second, rate the intervention strategies, designated by letters "a" through "j", for each of the listed impediments to planned change, numbered "1" through "10". Last, return the survey instrument to me in the enclosed, pre-addressed, and stamped envelope as soon as possible, but not later than December 3, 1991. To assist your efforts, a page entitled "Definitions of Intervention Strategies" has been included to help you understand what I mean by each of the intervention strategies.

Thank you for your assistance. If you have any questions, please feel free to call me at my home address listed above.

Sincerely,

Dale Kimball
DEFINITIONS OF INTERVENTION STRATEGIES

a. Research Based Studies

Research based studies are sometimes used as rationale for planned change in a school setting. The conclusions of these studies are usually the result of a case study or empirical research. Does a research based study help persuade those responsible for implementing a planned change that they should implement the change?

b. Legislative Mandate

A legislative mandate is something which the state or federal legislature says must be done. Does legislative mandate mean better acceptance of a change by those responsible for implementing the change?

c. New Materials

Does the promise of new materials or equipment help to gain the acceptance for a planned change from those responsible for implementing that planned change?

d. Long and Short Term Planning

Does planning for a change as a long term or short term goal really help much when it actually comes time for those responsible for implementation to implement it?

e. Persuasion by Opinion Leaders

Every staff or school system has employees to whom the other employees look for leadership. Their opinion counts. Does it help for the opinion leaders to be in favor of implementing a planned change, and can they be effective in persuading those responsible for implementing the planned change to proceed with implementation?

f. In-service Education

Does in-service education for those responsible for implementing a planned change, prior to attempting to implement change, help gain acceptance for the change?

g. Non-Threatening Atmosphere

Does an atmosphere where those responsible for implementing a planned change know they will not be punished if things do not go as planned help to gain acceptance for the planned change?
h. **Decentralized Authority**

Does site-based management, where those responsible for implementing the planned change are also responsible for suggesting and planning for the change, help to gain acceptance for the planned change?

i. **Parent Pressure Against A Change**

Is a planned change more readily accepted by those responsible for implementing the change if there is pressure being exerted by parent groups against the change?

j. **Parental Pressure For A Change**

Is a planned change more readily accepted by those responsible for implementing the change if there is pressure being exerted by parent groups for the change?
INSTRUCTIONS:

For the impediments (numbered 1-10) listed below and on succeeding pages, rate each listed intervention strategy by placing its assigned letter (a-j) in the appropriate space on the scale numbered "0" through "100". The number "100" represents the highest score a strategy can receive (indicating that the strategy approaches a 100% success rate), and zero "0" represents the lowest score a strategy can receive (indicating that the strategy approaches a 0% success rate). Strategies can be scored anywhere between "100" and "0", inclusive, to show how well you believe the strategy helps to overcome the impediments listed in this survey. Please do not rate any two intervention strategies exactly the same. For more detail on what the intervention strategies (a-j) listed below mean, please refer to "Definitions of Intervention Strategies" page which precedes this survey instrument.

If you have no experience with one of the intervention strategies (a-j) or the impediments (1-10) listed below, please do not respond to those items on the survey.

Intervention Strategies

a. Research Based Studies  
b. Legislative Mandate  
c. New Materials  
d. Long and Short Term Planning  
e. Persuasion by Opinion Leaders  
f. In-service Education  
g. Non-threatening Atmosphere  
h. Decentralized Authority  
i. Parental Pressure Against  
j. Parental Pressure for

Impediments:

1. The planned change causes those responsible for implementing the change to believe it may cause undesirable changes in their jobs.

0 10 20 30 40 50 60 70 80 90 100

2. The planned change is too complex, for those expected to implement the change, to understand.

0 10 20 30 40 50 60 70 80 90 100
**Intervention Strategies**

a. Research Based Studies  
b. Legislative Mandate  
c. New Materials  
d. Long and Short Term Planning  
e. Persuasion by Opinion Leaders  
f. In-service Education  
g. Non-threatening Atmosphere  
h. Decentralized Authority  
i. Parental Pressure Against  
j. Parental Pressure for

3. The planned change is perceived as disruptive because it may give students too much freedom.

4. The planned change is suspected to be a short-term educational fad.

5. The planned change makes people uncomfortable because it will change the way "it has always been done."

6. The planned change may upset labor groups and cause a "change in the condition of employment" and presents contract problems.

7. The planned change may require those responsible for implementing the change to get training on their "own time", outside of regular school day hours.
Intervention Strategies

a. Research Based Studies          f. In-service Education
b. Legislative Mandate             g. Non-threatening
   Atomsphere

c. New Materials                   h. Decentralized Authority
d. Long and Short Term Planning   i. Parental Pressure Against

e. Persuasion by Opinion Leaders  j. Parental Pressure for

8. The planned change is being impeded by misunderstandings between the principal and those expected to implement the change.

9. The planned change is being opposed by parents who see it as a change from the traditional challenges of their own education or from the moral values of the community.

10. The planned change seems doomed to failure due to a lack of support from the superintendent and the board of education.
Appendix B

Survey Questionnaire Initially Sent to Principals
Dear Colleague:

I am a doctoral candidate in Educational Leadership at Western Michigan University in Kalamazoo, Michigan. As a part of my dissertation, I am collecting data from principals in the State of Michigan. The enclosed survey questionnaire is designated to collect data from practicing elementary, middle, and high school principals. From this data, I hope to determine strategies which will help principals who are faced with obstacles when they try to implement planned change in their buildings.

You were selected for inclusion in this study by means of a proportional stratified sample of Michigan principals from the Michigan Educational Directory, 1991 edition. A coding procedure has been utilized solely for my benefit in collecting responses; however, your responses will be held in strict confidence. Your responses will not be analyzed or reported individually, as the process I am employing utilizes group response, not individual response, data for survey items.

I realize your time is extremely valuable, so I have attempted to make this survey instrument as brief and understandable as possible. It should only take about fifteen minutes to complete the following steps:

1. Read the directions on the survey.
2. Rate the intervention strategies, designated by letters "a" through "j", for each of the listed impediments to planned change, numbered "1" through "10".
3. Return the survey instrument to me in the enclosed, pre-addressed, and stamped envelope as soon as possible, but not later than April 15, 1992.

To assist your efforts, a page entitled "Definitions of Intervention Strategies" has been included to help you understand what I mean by each of the intervention strategies.

Thank you for your assistance. If you have any questions, please feel free to call me at my home address listed above.

Sincerely,

Dale Kimball
SURVEY INSTRUCTIONS:

For the impediments (numbered 1-10) listed below and on succeeding pages, please rate each listed intervention strategy by placing its assigned letter (a-j) in the appropriate space on the scale numbered "0" through "100".

The number "100" represents the highest score a strategy can receive (indicating that the strategy approaches a 100% success rate), and zero "0" represents the lowest score a strategy can receive (indicating that the strategy approaches a 0% success rate). Strategies can be scored anywhere between "100" and "0", inclusive, to show how well you believe the strategy helps to overcome the impediments listed in this survey. Please do not rate any two intervention strategies exactly the same.

For more detail on what the intervention strategies (a-j) listed below mean, please refer to "Definitions of Intervention Strategies" page which precedes this survey instrument.

If you have no experience with one of the intervention strategies (a-j) or the impediments (1-10) listed below, please do not respond to those items on the survey.

Example Survey Question:

Impediment: The planned change is being challenged because many do not trust the administration's motives for suggesting the change.

Example Survey Response:

\[
\begin{array}{cccccccc}
 & b & h & i & a & d & c & e & f & g \\
0 & 10 & 20 & 30 & 40 & 50 & 60 & 70 & 80 & 90 & 100 \\
\end{array}
\]

In the above example "g", non-threatening atmosphere, (see top of next page for listing of all intervention strategies) is rated as the best intervention strategy with a scale score of 95. This means that the principal filling out this survey believes that this strategy will work most of the time when facing the impediment in the example. "b" received a scaled score of 5. This means that the principal filling out this survey believes that "b", legislative mandate, will almost never work when facing the impediment listed in the example.
The rest of the letters were placed on the scale by the principal to reflect how well the intervention strategies represented by the letters "h", "i", "a", "d", "c", "e", and "f" will work for this example. From this example, it is clear that the principal believes that only intervention strategies "f", in-service education, and "g", non-threatening atmosphere, will be effective in overcoming the example's impediment.
Survey

Intervention Strategies

a. Research Based Studies
b. Legislative Mandate
c. New Materials
d. Long and Short Term Planning
e. Persuasion by Opinion Leaders
f. In-service Education
g. Non-threatening Atmosphere
h. Decentralized Authority
i. Parental Pressure For or Against

Impediments:

1. The planned change causes those responsible for implementing the change to believe it may cause undesirable changes in their jobs.

2. The planned change is too complex, for those expected to implement the change, to understand.

3. The planned change is perceived as disruptive because it may give students too much freedom.

4. The planned change is suspected to be a short-term educational fad.
**Intervention Strategies**

a. Research Based Studies  
b. Legislative Mandate  
c. New Materials  
d. Long and Short Term Planning  
e. Persuasion by Opinion Leaders  
f. In-service Education  
g. Non-threatening Atmosphere  
h. Decentralized Authority  
i. Parental Pressure For or Against

5. The planned change makes people uncomfortable because it will change the way "it has always been done."

6. The planned change may upset labor groups and cause a "change in the condition of employment" and presents contract problems.

7. The planned change may require those responsible for implementing the change to get training on their "own time", outside of regular school day hours.

8. The planned change is being impeded by misunderstandings between the principal and those expected to implement the change.
Intervention Strategies

a. Research Based Studies  
b. Legislative Mandate  
c. New Materials  
d. Long and Short Term Planning  
e. Persuasion by Opinion Leaders  
f. In-service Education  
g. Non-threatening Atmosphere  
h. Decentralized Authority  
i. Parental Pressure For or Against  

9. The planned change is being opposed by parents who see it as a change from the traditional challenges of their own education or from the moral values of the community.

10. The planned change seems doomed to failure due to a lack of support from the superintendent and the board of education.

[ ]

Check here if you want to receive results of this survey.
DEFINITIONS OF INTERVENTION STRATEGIES

a. Research Based Studies

Research based studies are sometimes used as rationale for planned change in a school setting. The conclusions of these studies are usually the result of a case study or empirical research. Does a research based study help persuade those responsible for implementing a planned change that they should implement the change?

b. Legislative Mandate

A legislative mandate is something which the state or federal legislature says must be done. Does legislative mandate mean better acceptance of a change by those responsible for implementing the change?

c. New Materials

Does the promise of new materials or equipment help to gain the acceptance for a planned change from those responsible for implementing that planned change?

d. Long and Short Term Planning

Does planning for a change as a long term or short term goal really help much when it actually comes time for those responsible for implementation to implement it?

e. Persuasion by Opinion Leaders

Every staff or school system has employees to whom the other employees look for leadership. Their opinion counts. Does it help for the opinion leaders to be in favor of implementing a planned change, and can they be effective in persuading those responsible for implementing the planned change to proceed with implementation?

f. In-service Education

Does in-service education for those responsible for implementing a planned change, prior to attempting to implement change, help gain acceptance for the change?

g. Non-Threatening Atmosphere

Does an atmosphere where those responsible for implementing a planned change know they will not be punished if things do not go as planned help to gain acceptance for the planned change?
h. Decentralized Authority

Does site-based management, where those responsible for implementing the planned change are also responsible for suggesting and planning for the change, help to gain acceptance for the planned change?

i. Parent Pressure For or Against A Change

Is a planned change more readily accepted by those responsible for implementing the change if there is pressure being exerted by parent groups for or against the change?
Appendix C

Survey Questionnaire Follow-Up Letter and Second Mailing
April 11, 1992

Dear Colleague:

About ten days ago you received a questionnaire asking you to rate nine intervention strategies as they apply to ten impediments to change. If this survey has been returned and our letters cross in the mail, please accept my thanks.

I know this is a very busy time of year for principals. It is possible that you have not had time to complete this survey or that you have misplaced the questionnaire amongst the overwhelming quantity of paper work that a principal must complete each week. If you have misplaced the questionnaire or did not receive the original questionnaire, please contact me and I will send you another immediately.

If you have questions you need answered before you complete the questionnaire or have some other reason you cannot complete the questionnaire, please call me so we can discuss your problem.

Please make every effort to complete your questionnaire today. It is essential to my research, which may be very beneficial to you as a principal.

Sincerely,

Dale Kimball
Dale Kimball
16895 Tomahawk Trail
White Pigeon, Michigan 49099

(616) 483-9212 (Home)
(616) 483-7676 (Work)

May, 1992

Dear Colleague:

About one month ago, I wrote to you seeking your help and opinion on a survey asking you to rate various approaches to overcoming obstacles to change. As of today, I have not received your completed survey. If it is in the mail, please accept my sincere thanks.

I am attempting this study as a partial requirement for my Ed.D. and to try to determine if principals have discovered ways to overcome common pitfalls when trying to implement change in their buildings. Certainly, this could be valuable information for principals, especially at a time when parents, business, the legislature, and students are asking schools to make substantial changes in the way they do business.

I am writing to you again because of the significance each survey has for the usefulness of this study. Your name was identified through a random sampling procedure in which every principal in Michigan had an equal chance of being selected. In order for the results of this study to be truly representative of the opinion of all Michigan principals, it is essential that each person in the sample return her or his questionnaire.

Response thus far has been good, and a large percentage of those returning the survey have indicated an interest in the results. Please check the box at the end of the survey if you would like a copy of the results. In the event that your questionnaire has been misplaced, a replacement is enclosed. Your help is greatly appreciated.

Sincerely,

Dale Kimball
SURVEY INSTRUCTIONS:

For the impediments (numbered 1-10) listed below and on succeeding pages, please rate each listed intervention strategy by placing its assigned letter (a-j) in the appropriate space on the scale numbered "0" through "100".

The number "100" represents the highest score a strategy can receive (indicating that the strategy approaches a 100% success rate), and zero "0" represents the lowest score a strategy can receive (indicating that the strategy approaches a 0% success rate). Strategies can be scored anywhere between "100" and "0", inclusive, to show how well you believe the strategy helps to overcome the impediments listed in this survey. Please do not rate any two intervention strategies exactly the same.

For more detail on what the intervention strategies (a-j) listed below mean, please refer to "Definitions of Intervention Strategies" page which precedes this survey instrument.

If you have no experience with one of the intervention strategies (a-j) or the impediments (1-10) listed below, please do not respond to those items on the survey.

Example Survey Question:
Impediment: The planned change is being challenged because many do not trust the administration's motives for suggesting the change.

Example Survey Response:

```
  b h i a d c e f g
  0 10 20 30 40 50 60 70 80 90 100
```

In the above example "g", non-threatening atmosphere, (see top of next page for listing of all intervention strategies) is rated as the best intervention strategy with a scale score of 95. This means that the principal filling out this survey believes that this strategy will work most of the time when facing the impediment in the example. "b" received a scaled score of 5. This means that the principal filling out this survey believes that "b", legislative mandate, will almost never work when facing the impediment listed in the example.
The rest of the letters were placed on the scale by the principal to reflect how well the intervention strategies represented by the letters "h", "i", "a", "d", "c", "e", and "f" will work for this example. From this example, it is clear that the principal believes that only intervention strategies "f", in-service education, and "g", non-threatening atmosphere, will be effective in overcoming the example's impediment.
Survey

Intervention Strategies

a. Research Based Studies  
f. In-service Education
b. Legislative Mandate  
g. Non-threatening
c. New Materials  
Atmosphere

d. Long and Short Term Planning  
h. Decentralized Authority
e. Persuasion by Opinion Leaders  
Against

Impediments:

1. The planned change causes those responsible for implementing the change to believe it may cause undesirable changes in their jobs.

2. The planned change is too complex, for those expected to implement the change, to understand.

3. The planned change is perceived as disruptive because it may give students too much freedom.

4. The planned change is suspected to be a short-term educational fad.
Intervention Strategies

a. Research Based Studies
b. Legislative Mandate
c. New Materials
d. Long and Short Term Planning
e. Persuasion by Opinion Leaders
f. In-service Education
g. Non-threatening Atmosphere
h. Decentralized Authority
i. Parental Pressure For or Against

5. The planned change makes people uncomfortable because it will change the way "it has always been done."

6. The planned change may upset labor groups and cause a "change in the condition of employment" and presents contract problems.

7. The planned change may require those responsible for implementing the change to get training on their "own time", outside of regular school day hours.

8. The planned change is being impeded by misunderstandings between the principal and those expected to implement the change.
**Intervention Strategies**

a. Research Based Studies  
b. Legislative Mandate  
c. New Materials  
d. Long and Short Term Planning  
e. Persuasion by Opinion Leaders  
f. In-service Education  
g. Non-threatening Atmosphere  
h. Decentralized Authority  
i. Parental Pressure For or Against

9. The planned change is being opposed by parents who see it as a change from the traditional challenges of their own education or from the moral values of the community.

10. The planned change seems doomed to failure due to a lack of support from the superintendent and the board of education.

[ ]
Check here if you want to receive results of this survey.
DEFINITIONS OF INTERVENTION STRATEGIES

a. Research Based Studies

Research based studies are sometimes used as rationale for planned change in a school setting. The conclusions of these studies are usually the result of a case study or empirical research. Does a research based study help persuade those responsible for implementing a planned change that they should implement the change?

b. Legislative Mandate

A legislative mandate is something which the state or federal legislature says must be done. Does legislative mandate mean better acceptance of a change by those responsible for implementing the change?

c. New Materials

Does the promise of new materials or equipment help to gain the acceptance for a planned change from those responsible for implementing that planned change?

d. Long and Short Term Planning

Does planning for a change as a long term or short term goal really help much when it actually comes time for those responsible for implementation to implement it?

e. Persuasion by Opinion Leaders

Every staff or school system has employees to whom the other employees look for leadership. Their opinion counts. Does it help for the opinion leaders to be in favor of implementing a planned change, and can they be effective in persuading those responsible for implementing the planned change to proceed with implementation?

f. In-service Education

Does in-service education for those responsible for implementing a planned change, prior to attempting to implement change, help gain acceptance for the change?

g. Non-Threatening Atmosphere

Does an atmosphere where those responsible for implementing a planned change know they will not be punished if things do not go as planned help to gain acceptance for the planned change?
h. Decentralized Authority

Does site-based management, where those responsible for implementing the planned change are also responsible for suggesting and planning for the change, help to gain acceptance for the planned change?

i. Parent Pressure For or Against A Change

Is a planned change more readily accepted by those responsible for implementing the change if there is pressure being exerted by parent groups for or against the change?
Appendix D

Human Subjects Institutional Review Board Approval
Date: November 6, 1991
To: Dale Kimball
From: Mary Anne Bunda, Chair
Re: HSIRB Project Number: 91-11-15

This letter will serve as confirmation that your research protocol, "Intervention strategies for use by principals in reducing the influence of impediments to planned change" has been approved under the exempt category of review by the HSIRB. The conditions and duration of this approval are specified in the Policies of Western Michigan University. You may now begin to implement the research as described in the approval application.

You must seek reapproval for any changes in this design. You must also seek reapproval if the project extends beyond the termination date.

The Board wishes you success in the pursuit of your research goals.

xc: Smidchens, Educational Leadership

Approval Termination: November 6, 1992.
BIBLIOGRAPHY


