A STUDY OF THE RELATIONSHIPS BETWEEN SUPERINTENDENTS' LEADERSHIP PRACTICES, SOCIAL NETWORKS, AND PERPETUATION AND CHANGE OF SCHOOL CULTURE

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CHAPTER I

DESIGN OF THE STUDY

Public schools were conceived from and function in a climate of opinion (Callahan, 1962; Newlon, 1934). During the past two decades, the climate of opinion toward public schools' effectiveness has been fueled by economic and cultural anxieties and a problematic political climate. Global demographic shifts and economic competitiveness have spawn concern that America's position in the world order is being threatened (Chubb & Moe, 1990; Elmore, 1990) and "Americans have translated their cultural anxieties and hopes into dramatic demands for educational reform" (Tyack & Cuban, 1995, p. l).

Articulating opinion through a report entitled, *A Nation at Risk: The Imperative for Educational Reform* (1983), political leaders focused blame for the nation's decline on its public schools. The report to America's people stated, "the educational foundations of our society are presently being eroded by a rising tide of mediocrity that threatens our very future as a Nation and a people" (p. 5). These social and political conditions, coupled with scholarly critiques indicating that public schools are doing a poor job of engaging all students in rigorous learning of academic content (Conant, 1959; Goodlad, 1984; Sizer, 1984; Chubb & Moe, 1990), give rise to the perception that America's public education system is not working. This prevailing perception of decline creates distress upon the satisfying culture of the education community and heightens the

need to examine the leadership within public schools.

According to a body of literature (Bidwell, 1965; Deal & Peterson, 1999, Getzels & Guba, 1957; Katz & Kahn, 1966, 1978; Sarason, 1983), public schools are cultural structures organized to perpetuate the instruction of societal values and norms to its youth *and* to help society change its norms as information changes. Perpetuation and change are competing purposes, creating conflict.

Perpetuation has been studied through a concept called *culture*. Early researchers (Benedict, 1934; Kroeber & Kluckhohn, 1952) viewed culture within organizations, like schools, as a multifaceted, holistic phenomenon drawn from deeply structured beliefs, values, and artifacts of the past which forms a historical-evolutionary-reproductive nature that eludes efforts to shape or manage. From this perspective, an organization does not *have* culture, it *is* culture (Sackmann, 1991; Smircich, 1983). Other researchers (Douglas, 1982; Schein, 1984) have demystified the holistic nature of culture by distinguishing cognitive features such as thoughts, behaviors, and symbols that are humanly constructed and maintained. These cognitive elements accentuate permitting and constraining factors, such as leadership, that can be a powerful means to shape school culture (Sergiovanni & Starratt, 1983; Deal & Peterson, 1999).

The study of the change process within educational organizations is relatively young (Fullan, 1991). The review of significant literature on change in public schools indicates that the movement is toward continuity rather than change (Conant, 1959; Fullan; 199l, 1994; Goodlad, 1984; Lortie, 1975; Sergiovanni, 1996). When change can be found, research findings indicate that a process of reculturing rather than restructuring occurred (Fullan, 1991; Sergiovanni, 1996).

The major factor in an organization's effectiveness is leadership (Bennis, 1984; Burns, 1978; Deal & Peterson, 1999; Fiedler, 1967; Fullan, 1991; Sarason, 1982; Sergiovanni, 1973). Administrative practices which promote transformational (Burns, 1978), pedagogical (Van Maanen, 1991), and adaptive (Heifetz, 1994) leadership are conducive for cultural constructions, like schools. Leadership can be a force which promotes change within an organization *or* leadership can be a force which resists change (Heifetz, 1994). According to Deal and Peterson (1999), "Leaders must perpetuate what is thriving in the present while reaching for what may be even better in the future. They must both embrace change and remain the same" (p. 138).

Statement of the Problem

One purpose of public school is to *perpetuate* societal norms and values to the nation's youth (Bidwell, 1965; Deal & Peterson, 1999; Getzels & Guba, 1957; Katz & Kahn, 1966, 1978; Sarason, 1983). Perpetuation has been studied through a concept called culture in which strong ties (Granovetter, 1973, 1976, 1995) exist as a result of shared beliefs, values, and practices among members of a group. These strong ties foster the perpetuation of the dominate cultural norms and values.

Another purpose of public school is to help society *change* its norms as information changes (Bidwell, 1965; Deal & Peterson, 1999; Getzels & Guba, 1957; Katz & Kahn, 1966, 1978; Sarason, 1983). Like perpetuation, the concept of culture has been used to study change. The lack of change in public schools has been attributed to the lack of attention given to changing the cultural norms and values (Fullan, 1991; Sergiovanni, 1996). Fulfilling the second purpose of public school, to change values and norms, challenges the dominant culture by proposing that others' beliefs, values, and practices

become a part of the school's culture. Ties between those in the dominant culture and others with different backgrounds and experiences are characterized as weak ties (Granovetter, 1973, 1976, 1995) which foster change in the dominate cultural norms and values.

These duel foundational purposes for public school (perpetuation and change) create a paradox in which Heifetz's (1994) leadership theory can be used to explore the perpetuation and change of school culture in terms of how superintendents define and operationalize the curriculum work and assign individuals to work groups. The work of an organization can be classified as technical or adaptive (Heifetz, 1994).

Technical work is characterized by problems that are easily defined and have readily known answers to fix them, members being grouped to inform them how they can help fix the problem, and reduction in the level of distress within the organization. Adaptive work is characterized by elusive definitions to problems; ineffective results when known solutions are tried; the need for new learning in order to define and unravel issues surrounding the problem and grouping of members to define the problem and possible solutions; entwining of problem definition, implementation, and evaluation; and a productive range of distress maintained over an extended period of time.

Network Analysis (Granovetter, 1973, 1976, 1995) and Perpetuation Theory (Braddock, 1980, McPartland & Braddock, 1981; Wells & Crain, 1994) can be used to explain the perpetuation and change of school culture in terms of the interaction of strong and weak ties among members assigned to work groups by the superintendent. Perpetuation of the cultural values and norms should be the result of the work within the district being defined and operationalized as technical (Heifetz, 1994) which allows the

predominance of strong ties (Granovetter, 1973, 1976, 1995) among members of work groups assigned by the superintendent. Change of cultural values and norms should be the result of the work within the district being defined and operationalized as adaptive (Heifetz, 1994) which allows the predominance of weak ties (Granovetter, 1973, 1976, 1995) among members of the work groups assigned by the superintendent.

Purpose of the Study

Using the lenses of leadership theory (Heifetz, 1994), Network Analysis (Granovetter, 1973. 1976, 1995) and Perpetuation Theory (Braddock, 1980; McPartland & Braddock, 1981; Wells & Crain, 1994), the purpose of this study was to examine superintendents' leadership and its influence in shaping school culture. Specifically, the following was accomplished:

1. Characterization of the "work" (Heifetz, 1994) as defined and operationalized by superintendents and the "ties" (Granovetter, 1973, 1976, 1995) within the work groups assigned by the superintendents;

2. Analysis of: (a) the "work" through the lenses of adaptive and technical work (Heifetz, 1994), (b) the "ties" through the lenses of Network Analysis (Granovetter, 1973, 1976, 1995), and © the connection of "work" and "ties" to perpetuation through the lenses of Perpetuation Theory (Braddock, 1980; McPartland & Braddock, 1981; Wells & Crain, 1994);

3. Speculation about the relationship of the "work" and "ties" to perpetuation and change of school culture;

4. Reporting of other realities that may be revealed; and

5. Assessment of the usefulness of these lenses for theory, research, and practice.

Theoretical Framework

Leadership theory (Heifetz, 1994), Network Analysis (Granovetter, 1973, 1976, 1995), and Perpetuation Theory (Wells & Crain, 1994) influenced the development of the theoretical framework for this study. The multidimensional framework provides lenses to analyze the influence of superintendents' leadership on the perpetuation and change of school culture by examining: (1) their definition, operationalization, and assignment of the work within the district and (2) the strength of ties among members of work groups assigned by them.

Leadership Theory

Heifetz (1994) presents a conceptual framework to examine leadership and its relationship to perpetuation and change. He categorizes the work of an organization as technical and adaptive. In technical work, the problem is easily defined; readily known answers exist to "fix" the problem; members are grouped to provide the information they need to "fix" the problem; and the "fix" reduces the level of distress within the organization. In adaptive work, problem definition is elusive, rendering known solutions ineffective; new learning is needed to define and unravel issues surrounding the problem; members are grouped to define the problem and possible solutions; problem definition, implementation, and evaluation of results become entwined; and a productive range of distress is maintained over an extended period of time.

According to Heifetz (1994), both technical and adaptive work serve a vital purpose depending on the needs of the organization. The purpose of technical work is to perpetuate the existing culture of an organization. The purpose of adaptive work is to change the culture of an organization. The concept of technical and adaptive work

provides a framework to examine superintendents' definition, operationalization, and assignment of curriculum work in the district.

Network Analysis

Analysis of social networks is a useful tool in linking the interpersonal structure of small groups to large-scaled social patterns--*culture*. According to Wasserman and Faust (1994), "social network analysis provides a precise way to define important social concepts, a theoretical alternative to the assumption of independent social actors, and a framework for testing theories about structured social relationships" (p. 17). Likewise, Granovetter (1973) argues that the analysis of processes in interpersonal networks provides the most promise to understanding how these networks of "small-scale interaction becomes translated into large-scale patterns, and that these, in turn, feed back into small groups" (p. 1360). Network Analysis can be used to show the influence of networks on the perpetuation and change of school culture.

Granovetter's (1973, 1976, 1995) concept of strength of interpersonal ties serves as a structural framework for this study allowing for the identification and examination of ties among members of work groups assigned by the superintendent. According to Granovetter (1973) the strength of a tie is found in "a combination of the amount of time, the emotional intensity, the intimacy (mutual confiding), and the reciprocal services that characterize the tie" (p.1361). He stresses that while these concepts may be independent of the other, used in combination or as a set they are "highly intracorrelated" (p. 1361).

Network Analysis (Granovetter's 1973, 1976,1995) provides a framework to identify the strength of ties among work group members assigned by superintendents. Using Granovetter's equation of the amount of time, emotional intensity, intimacy, and

reciprocity, identified ties between work group members can be categorized as strong or weak. Overall, weak ties afford individuals new and more opportunities and tend to create change; whereas, strong ties tend to perpetuate the existing social ideas (Granovetter, 1973, 1976, 1995).

Perpetuation Theory

Braddock (1980) focused on how individuals adjust their behavior to accommodate structural constraints and thus perpetuate these constraints. He unfolded perpetuation theory by studying the tendency of black Americans to perpetuate racial segregation and how exposure to desegregated settings changed the accommodating behavior.

McPartland and Braddock (1981) found that segregation tends to repeat itself "across the stages of the life cycle and across institutions when individuals have not had sustained experiences in desegregated settings earlier in life" (p. 149). Braddock (1980) found that black adults who were never afforded the opportunity to test their racial beliefs because of racial segregation as students, tended to make choices that maintain segregation. However, black students who attended desegregated high schools were more likely to attend predominantly white colleges (Braddock, 1980).

Wells and Crain (1994) employed the concept of Network Analysis, using the notion of strong and weak ties, in conjunction with Braddock's (1980) perpetuation theory. They found that black students who attended desegregated high schools have higher educational and occupational aspirations than those who attended segregated settings (Wells & Crain, 1994). For these black students, familiarity with desegregated settings led them to adjust their behavior and *not* accommodate the structural constraints

that perpetuated segregation. Therefore, Perpetuation Theory (Braddock, 1980; Wells & Crain, 1994) may be useful in predicting the acclimation of individuals into group settings.

Perpetuation Theory (Braddock, 1980; Wells & Crain, 1995) was used to relate the findings revealed through data analysis of superintendents' perception of "work" and work group members' "ties" to perpetuation and change of school culture.

Framework Summary

The framework used in this study combines the use of a conceptual leadership theory and social network theory in conjunction with Perpetuation Theory to propose a connection between the leadership practices of public school superintendents and the perpetuation and change of school culture. The three part framework includes: (1) Heifetz's (1994) concept of technical and adaptive work to identify and examine how superintendents define, operationalize, and assign the curriculum work within the district; (2) Network Analysis (Granovetter, 1973, 1976, 1995) to identify and examine the ties within a work group and determine the strength of those ties using amount of time, intensity, intimacy, and reciprocity as indicators; and (3) Perpetuation Theory (Braddock, 1980; Wells & Crain, 1994) to relate the findings revealed through the analysis of superintendents' perception of "work" and work group members' "ties" to perpetuation and change of school culture.

Using the concepts of "work" and "ties" in combination, theoretically, superintendents viewing curriculum work as technical would group individuals with strong ties. This would lead to perpetuation of shared knowledge and familiar ideas, thereby perpetuating the existing school culture. Superintendents viewing work as

adaptive, would result in work groups comprised of individuals with weak ties. This would link individuals with unfamiliar ideas that affords them more opportunities, thereby changing the existing school culture.

Procedures

This study first examines how superintendents define and operationalize the work within the district, and secondly, the strength of ties among members of work groups assigned by the superintendents. The nature of the problem lends itself to the qualitative research method. Merriam (1988) proposes that "qualitative research assumes there are multiple realities that are a function of personal interaction and perception" (p. 17) and the qualitative method "offers a workable rationale for performing significant research in human settings" (Erlandson, Harris, Skipper, & Allen, p. 9), like public schools. Through the naturalistic inquiry method, data is gathered, tentative meaning is applied, new data is gained, and meaning is amended (Merriam, 1988). The use of a conceptual framework provides the structure to view the problem through a specified set of assumptions, rules, and directions.

The explanatory case study method of inquiry (Yin, 1989) was employed to gather information for this study. An explanatory case study generally seeks to answer the "how" and "why" questions; therefore, it is "an ideal design for understanding and interpreting observations of educational phenomena" (Merriam, 1988, p. 2). The case study process allows for the development of a thick description of the phenomenon under study (Lincoln & Guba, 1985). Prior to beginning the field research, the proposal was submitted and approval (Appendix A) to proceed with the study gained from the Oklahoma State University Institutional Review Board. Following approval to proceed,

permission to conduct the study was gained from superintendents and other participants (Appendix B).

Researcher

A brief description of the researcher is included here to provide the reader a glimpse of the beliefs, assumptions, and experiences I carry. My educational experience includes four years of classroom teaching at the junior and high school levels; 12 years as counselor, with two years being at the junior and high school levels and ten years as an elementary developmental guidance counselor, working with students in the classroom setting in grades one through six; ten years as principal at the middle school level; and three years as assistant superintendent. I taught in a metropolitan area school for four years, a small rural school for two years, and a mid-sized school in a rural area for the past 23 years. During this time I have participated in the leadership efforts, or lack thereof, of seven superintendents or interim superintendents, with the past 23 years being the same superintendent.

Having worked in schools for three decades and participated in the innovations of the 1970s, restructuring and reform movements of the 1980s, and the systemic change initiatives of the 1990s, it is my observation that change is an arduous process which is met with resistance in varying degrees. Drawing further back in my educational experiences, I was a participant in consolidation and integration as a student in elementary school. Later as a high school student, I saw the educational discrimination which occurred as young men in my graduating class went to war and the women to college. During my college years, I participated in the margins of the turbulence surrounding the Vietnam Era.

As a young teacher I felt the discrimination of being female when I was paid less than male teachers and was forced to resign my position teaching home economics when I was three months pregnant. From these experiences I have formed a set of values grounded in both perpetuation and change. I believe that both are an expectation of modern society and that meaningful change occurs at the cultural level when the disparity between the values and experiences are in conflict. Shaped by my experiences and the extensive study of culture, change, and leadership during the past six years, I am growing in my understanding of the failed efforts to implement change in public schools and have begun to perceive change as an evolutionary or adaptive process requiring time. Therefore, leadership which will perpetuate societal norms and values, yet, change those norms when new information demands, comes as a pedagogical process.

My views are reflected in the problem statement and theoretical framework I have chosen and according to Merriam (1988) will affect my data gathering and analysis process, as well as interpretation of findings. Knowing this, I will employ research practices to cast the data against the literature and ground interpretations within the theoretical framework.

Data Needed and Sources

Naturalistic inquiry focuses meaning on the context through the process of observing, recording, analyzing, reflecting, dialoguing, and rethinking (Merriam, 1988). Richness of information rather than representativeness was needed (Zyzanski, McWhinney, Blake, Crabtree, & Miller, 1992). Empirical information was needed concerning how superintendents define and operationalize the work within the district and the relationship among members assigned to work groups. Leadership theory has

been used to explore how leaders connect individuals to their work and to each other (Heifetz, 1994). Network Analysis has been used to investigate relationships among individuals assigned to work groups by the superintendent (Granovetter, 1973, 1976, 1995).

This study included the superintendents from three public school districts and members of work groups assigned by them. Sites were selected that are mid-sized (between 1000 and 2000 students), serve students in pre-kindergarten through grade 12, strive to integrate change into their respective school cultures, and use work groups to accomplish the curriculum work of the district.

Data Collection

Interview, observation, network questionnaire, and demographic profile were the primary instruments and method for collection, analysis, and interpretation of the data (Merriam, 1988). The long interview method of inquiry took me "into the mental world of the individual, to glimpse the categories and logic by which he or she sees the world" (McCracken, 1988, p. 9). The goal of the long interview was to "make otherwise invisible patterns stand out . . . making things visible, both in gathering data and in communicating findings to others" (Dabbs, 1982, p. 31). The long interview accommodated the exploration of multiple realities through assessing, redirecting, and probing to increase the richness of the information.

To gain empirical information concerning how superintendents define and operationalize the work within school districts and assign members to work groups, superintendents from the selected sites were interviewed using an open-ended format to guide interviews, allowing for dialogue and interaction. A series of questions was

structured to facilitate the long interview (Appendix C). Responses from the superintendents will guide the follow-up interview questions.

To gain information for Network Analysis, a list of individuals assigned to a curriculum work group was obtained from the superintendent. One work group was studied from each district. Individuals assigned to each curriculum work group were surveyed (Appendix D) and asked to identify their relationship to other members assigned to the same group. In addition, each respondent was asked to complete a demographic information sheet identifying individual factors related to education and work experiences. Sociometric data gained through initial analysis were cross-referenced with demographic data to identify potential commonalities among members within the work group.

Following interpretation of the empirical information gained from the respondents, further investigation was conducted using follow-up interviews with the superintendents and some respondents to gain additional insight and clarify responses. A process of continuous assessment and evaluation of data collected allowed me to "understand and put into a larger context the interpersonal, social, and cultural aspects of the environment" (Lincoln & Guba, 1985, p. 85) and to mentally experience and reconstruct events in which I did not actively participate (Rubin & Rubin, 1995).

Data Analysis

Empirical information was analyzed simultaneously throughout data collection using Merriam's (1988) views of qualitative design to guide the process. She maintains, "one does not know whom to interview, what to ask, or where to look next without analyzing data as they are collected" (p. 123). The sample population was defined prior

to beginning the field research; however, the need for follow-up interviews was revealed through reflecting simultaneously on the literature and information collected. This permitted reflection and synthesis, which informed and redirected the data collection and analysis process.

Empirical information from the long interviews with superintendents, membership lists of work groups, surveys of members assigned to work groups, and demographic profiles were viewed through two lenses: technical and adaptive work (Heifetz, 1994) and the strength of ties (Granovetter, 1973, 1976, 1995) among work group members assigned by the superintendents. In addition, Perpetuation Theory (Braddock, 1980; Wells & Crain, 1995) provided the lens through which to analyze the findings revealed through data analysis of superintendents' perception of "work" and work group members' "ties" in relationship to perpetuation and change of school culture.

The components of technical and adaptive work (Heifetz, 1994) were used to analyze the curriculum work as defined, operationalized, and assigned by the superintendent. Empirical information from the superintendents' long interview was analyzed to provide information on Heifetz's (1994) components of technical and adaptive work. Technical work is: (1) easily defined, (2) defined by one, (3) defined and operationalized using known answers, (4) operationalized to "fix" the problem, and (5) timed to quickly reduce distress. Adaptive work is: (1) elusive to define, (2) defined by group, (3) defined and operationalized using new learning, (4) operationalized to resolve issues through problem definition, implementation and evaluation entwinement, and (5) timed to maintain a productive range of distress over an extended period of time. Recurring regularities in the data were sought. As questions were raised, they were used

to guide further investigation and served as a basis for determining follow-up interview questions. Follow-up interviews with the superintendents provided additional data to compare with the original categories. Through constant comparison of empirical information, the analytical categories began to crystallize.

Network Analysis (Granovetter, 1973, 1976, 1995) occurred to identify relationships between individuals assigned to the curriculum work group and to analyze the strength of ties among members. Information from the members' surveys and demographic information sheets was analyzed using Granovetter's (1973, 1976, 1995) characteristics of ties: (1) time, (2) emotional intensity, (3) intimacy, and (4) reciprocity. The information was organized to illuminate the patterns of relationships--the similarities and differences reflected by the data. Simultaneous analysis, review and synthesis of information produced clues to determine participants and questions for the follow-up interviews. Information gained through follow-up interviews informed and redirected the study.

In conjunction with Heifetz's (1994) components of technical and adaptive work and Granovetter's (1973, 1976, 1995) Network Analysis to determine the strength of ties, Perpetuation Theory (Braddock, 1980; Wells & Crain, 1994) served as a theoretical framework through which to (1) view possibilities and speculate on the meaning of the findings gleaned through data analysis and (2) formulate and present the possible connection of "work" and "ties" to perpetuation and change of school culture.

Research Criteria

For a qualitative study to be considered trustworthy, the criteria of credibility, transferability, dependability, and confirmability must be met (Erlandson et al., 1993;

Linclon & Guba, 1985).

Credibility

The correlation between the perceptions and realities expressed by the respondents and the interpretations and articulation of the respondents' realities by the researcher represents credibility (Guba & Lincoln, 1989). The respondents in the study were given the opportunity to review data from their perspective interviews and challenge, confirm, or modify interview data to assure factual information. By separating myself and my biases from the empirical information and striving to accurately characterize what the research subject revealed, credibility of the research has been established.

Member checks and peer debriefings were used to establish credibility of the research study. Peer debriefing permitted an outside professional to analyze the process and provide feedback about findings and conclusions in order to challenge, clarify, refine and redirect the study as needed. My dissertation advisor, Dr. Adrienne Hyle, served as this professional. Throughout the process and upon completion of the study, member checks allowed respondents to test categories, interpretations, and conclusions of the study. Member checks with individuals who provided empirical information was conducted by me summarizing the data and permitting the respondents the opportunity to correct errors of fact or errors of interpretation, offer additional information, or judge the overall adequacy of the interview itself (Guba & Lincoln, 1989).

Transferability

Transferability refers to the extent to which the findings of a study can be transferred or applied in other contexts or with other respondents (Lincoln & Guba,

1985). Transferability depends on the "similarities between sending and receiving contexts" (Erlandson et al., 1993, p. 33). The thickness of descriptions that can be generated through the study allows those in other contexts to determine the relevance or applicability of observations for their own context and develop "working hypotheses" to guide their inquiry (Erlandson et al., 1993). Thick descriptions along with purposive sampling help promote transferability. Thick descriptions heighten the similarities between the sending context of the respondent and the receiving context of the researcher. Empirical information was presented in ample detail to allow the readers sufficient information to place themselves in the context of the inquiry. Purposive sampling allows the researcher to select the respondents to "fit" the purpose of the study. In this study, respondents were chosen based on their ability to provide insight and understanding to inform the inquiry.

Dependability

To be dependable, "the inquiry must meet the criterion of consistency" (Erlandson et al., 1993, p. 33). Dependability in a qualitative study refers to the reliability and tractability of the information and process (Lincoln & Guba, 1985). Detailed records provide an audit trail in which the information and process can be tracked. A reflexive journal provides a detailed recording of daily schedule, methodological process, and the "rummaging" as I reacted with information collected. A journal was kept during data collection and analysis, and reviewed by me on a weekly basis (Erlandson et al., 1993).

Confirmability

According to Erlandson and others (1993), "objectivity is an illusion and no methodology can be totally separated from those who have created and selected it"

(p. 34). Confirmability refers to the ability to track data to their sources "and that the logic used to assemble the interpretations into structurally coherent and corroborating wholes is both explicit and implicit" (Guba & Lincoln, 1989, p. 243). Confirmability, like dependability is communicated through an audit trail allowing for the study's conclusions, interpretations, and recommendations to be traced to their sources and supported by the inquiry (Erlandson et al., 1993). The audit trail for this study included interview transcripts, tapes, field notes, reflexive journal and other documents.

Significance of the Study

The findings of this study may yield significant results to the areas of theory, research, and practice.

Theory

Theoretically, this study combined the use of leadership theory, Network Analysis, and Perpetuation Theory to examine the relationship between the leadership practices of public school superintendents, ties among work group members, and perpetuation or change of school culture. Heifetz's (1994) concept of technical and adaptive work provided a framework to view how superintendents define and operationalize the work within the district and assign individuals to work groups. Network Analysis (Granovetter, 1973, 1976, 1995) provided a means to identify and examine the ties within a work group to determine their strength in relationship to time, intensity, intimacy, and reciprocity. In conjunction with Network Analysis (Granovetter, 1973, 1976, 1995), Perpetuation Theory (Wells & Crain, 1994) was useful in formulating and presenting the possible connection between the strength of ties among members assigned to work groups and the perpetuation and change of school culture.

Research

This study adds information to the limited knowledge base regarding the impact of superintendents' leadership practices and the strength of ties within work groups on the perpetuation or change of school culture.

Practice

This study informs the practice of educational administration by providing superintendents and others with insight regarding the definition and operationalization of work within the district, the formation of work groups to accomplish that work and the relationship of strong ties and weak ties to perpetuation and change. Through this recognition, practice can be enhanced by a concerted effort to recognize that these elements influence the perpetuation or change of school culture.

Summary

The purpose of this study was to examine how public school superintendents' leadership practices influence the perpetuation or change of school culture through their definition and operationalization of the curriculum work within the district and the strength of ties among members they assigned to work groups. Heifetz's (1994) theory of leadership through technical or adaptive work was used to conceptualize how superintendents define the curriculum work, operationalize that work, and assign individuals to work groups. Network Analysis, using Granovetter's (1973, 1976, 1995) strong, weak, and absent ties, was used to identify and examine the relationships among the members of the curriculum work groups assigned by the superintendents. In addition, Perpetuation Theory (Braddock, 1980; Wells & Crain, 1994) provided the lens through which to analyze the connections of the "work" and "ties" to perpetuation and to

speculate about their relationship to perpetuation and change of school culture.

Reporting

Chapter II reviews the literature. Chapter III presents the data collected. Analysis and interpretation of the study will comprise Chapter IV. Chapter V includes the summary, conclusions, recommendations, implications, and commentary.

CHAPTER II

REVIEW OF LITERATURE

The review of literature which guided this study encompasses a variety of topics including: schools as cultural constructions; the concept of change and perpetuation; and an overview of leadership theories, including theories based on trait and situation, dimensions, managerial grid, contingency, transactional, and collective purpose.

Schools as Cultural Constructions

Schools are organized social entities established to perpetuate the instruction of societal values and norms to the nation's youth and to help society change its norms as information changes (Bidwell, 1965; Deal & Peterson, 1999; Getzels & Guba, 1957; Sarason, 1983; Katz & Kahn, 1966, 1978). To better understand schools, the internal and external forces which drive them and the factors which permit and constrain change within them, an understanding of the nature of culture is needed.

The study of culture is not new. Early studies of group revealed that the complex whole (Tylor, 1929), along with the interactive nature of social collectives, forms consistently constructed patterns of thought and action (Benedict, 1934). The Western Electric Studies (Roethlisberger & Dickson, 1938) found that employees develop a set of group norms that both influenced and restricted the performance of individuals in the group. Douglas (1982), Schein (1992), and others (Merton, 1957; Parsons, 1951) support the notion that culture is created by current members of the organization who are

influenced by past people and traditions of the group. Once formed, culture becomes reciprocal by providing structures to foster the survival of the organization through adaptation to its external environment and integration of its internal processes. Sergiovanni (1996) describes culture as a "metaphor adopted from the disciplines of sociology, anthropology, and moral philosophy, where it refers to the values and rituals that provide people with continuity, traditions, identity, meaning, and significance, as well as to the norm systems that provide direction and structure their lives" (p. 20).

Drawing from the anthropological and sociological literature on culture, Sackmann (1991) outlined three views: (1) holistic, (2) variable, and (3) cognitive. Each view presents differing, yet overlapping, perspectives of culture. The holistic perspective defines culture through "patterned ways of thinking, feeling, and reacting that are acquired and transmitted mainly by symbols" (Sackmann, p. 18). The works of anthropologist Benedict (1934) and Kroeber and Kluckhohn (1952) illuminate the holistic view through their integration of deeply structured beliefs, values, and artifacts unifying to form culture. This historical-evolutionary-reproductive perspective of culture implies that an organization does not simply have culture, it *is* culture (Sackmann, 1991; Smircich, 1983). Viewed through the lens of the holistic perspective, the multifaceted nature of culture defies and eludes efforts to be shaped or managed (Sackmann, 1991).

Drawn primarily from the behavioral sciences and symbolic anthropology, the variable perspective of culture focuses on expressions that are behavioral, artifactual or symbolic in nature (Sackmann, 1991). Through permitting and constraining factors within the social collective, tangible cultural manifestations are humanly constructed to produce shared meanings and assumptions (Schein, 1983). Expressions of the social

collective can be observed through physical activities such as rituals and ceremonies (Firestone & Wilson, 1985) and verbal activities such as stories, myths, and legends (Deal & Kennedy, 1982) or language, metaphors, and jargon (Lakoff & Johnson, 1980). From the variable culturist's perspective, culture is something that organizations *have*--simply another variable that can be controlled by elements within the organization.

The third perspective of culture is cognitive, also called idealism. Drawn from the fields of anthropology and sociology, this cognitive aspect of culture distinguishes between organizational knowledge and organizational operation. Sackmann (1991) describes organizational knowledge as the "form of things people have in their minds; their models for perceiving, integrating, and interpreting them; the ideas or theories that they use collectively to make sense of their social and physical realities" (p. 21). These socially constructed ways of knowing are driven by the shared thoughts, beliefs, attitudes, values and orientations which are the result of common learning and shared experiences of the group (Caplow, 1983; Katz & Kahn, 1966, 1978; Schein, 1985). Within the organization, culture serves as a "social construction of rules that guide perceptions and thinking" (Sackmann, 1991, p. 22).

The literature on culture indicates multiple and somewhat conflicting perspectives; however, a common element is that culture matters. It is what people believe, the assumptions they make, what they consider to be real or true, and is the "intangible psychological cement" (Katz & Kahn, 1978, p. 173) that binds a collective together. Research findings on this interactive, humanly constructed nature of culture will be explored more fully to gain insight about the nature of school culture.

Katz and Kahn (1978) classified the school, along with family and church, as a

maintenance institution that serves the purpose of molding youth for adult roles. This view was shared by others (Bidwell, 1965; Getzels & Guba, 1957) who describe public schools as complex social systems deliberately established for the purposes of transmitting knowledge and skill in order to perpetuate the instruction of society's values and norms to the nation's youth and to help society change its norms as information changes. Thompson (1967) argues that schools are institutions of a bureaucratic society developed and designed to shape individuals to become better suited to organizational life. Within the efforts to shape, mold, and perpetuate, schools develop their own culture that is ever-changing and unique to the individuals within the school setting (Halpin, 1966; Sarason, 1982).

Inclusive in the concept of school culture are what people within the setting find meaningful and significant--shared meanings that shape the institution and its participants. In essence, schools become "a living statement of culture and of values that forms a part of the consciousness" (Foster, 1986, p. 10) of all members of the school environment, both internal and external. Cultural analysis goes beyond studying goals, systems, and structures and focuses more on meanings attached to different expressions of social interaction, giving a better perception of a socially constructed organization like school. Researchers have posited that the conditions under which culture evolves and changes are major factors in improving schools (Foster, 1986; Nias et al., 1989; Sergiovanni, 1996) and that "building of collaborative cultures involves a long developmental journey" (Fullan & Hargreaves, 1996, p. 57). Fullan (1994) argues that the focus on restructuring schools needs to be shifted to reculturing schools to bring about needed improvements in the "teaching-learning core of the school" (p. 187).

Fullan (1994) views school culture through the cognitive perspective, which according to Sackman (1991) describes "conceptual designs that provide standards for deciding what is, what to do about it, and how to go about" (p. 22) reculturing. Through this socially constructed view of culture, leadership can be a powerful means to shape or manage the culture within the organization (Burns, 1978; Sergiovanni & Starratt, 1983). Leadership that surpasses simple management communicates a vision, purpose, and belief (Bennis, 1984; Foster, 1986) that empower participants in the school organization to rethink the socially constructed rules that guide individual and group perception, thinking, and action (Sackmann, 1991). Hitt (1990) examined the interplay of leadership and school culture and found that they are "interconnected in a causal chain" (p. 211). These cognitive, collaborative cultures "lie within the control of those who participate in them; teachers and members together make their own schools" (Nias et al., 1989, p. 186).

In summary, schools are organized social structures that are culturally constructed to perpetuate the instruction of societal values and norms to its youth and to help society change its norm as information changes. The literature presents multiple perspectives from which to view culture, with the variable and cognitive perspectives presenting the most promise for change and the holistic perspective being the most resistant and difficult to change. An understanding of the nature of culture is needed to understand schools, the internal and external forces which drive them, and the factors which permit and constrain change within them.

The Concept of Change

The nature of culture within public schools creates conditions resistant to change and according to some researchers (Callahan, 1962; Fullan, 1991; Lortie, 1975),

movement tends to be toward continuity rather than change. This section reviews the literature on the concept of change within public schools.

The study of the change process within educational organizations is relatively young (Fullan, 1991). Two factors, both perceived as threats to the national welfare and defense, have been credited with prompting the dialogue on educational change: (1) unacceptable math and science performance noted in high school graduates recruited in World War II and (2) the Russian's launch of the first satellite in 1957 (Goodlad, 1965). From that time, organizational change has become "big business" (Foster, 1986, p. 147) spawning numerous innovations in the business world, as well as education.

Fullan (1991) contends that it has only been "since the 1960s that we have come to understand how educational change works in practice" (p. 5). He classified findings into four phases: adoption, 1960s; implementation failure, 1970-77; implementation success, 1978-82; and intensification vs. restructuring, 1983-1990. The adoption phase was labeled as such because of the preoccupation of school people to adopt one innovation after another. The thinking that dominated the decade was that the more innovations the better.

By 1970, the failure of innovations was exposed by researchers who articulated their shortcomings and failures to bring about change (Goodlad & Klein, 1970; Sarason, 1971; Smith & Keith; 1971). Failure to articulate purpose prior to adopting innovations doomed most from the beginning. The implementation phase from 1970-77 was labeled "failure" because educators experienced failure and educational studies concluded that the innovations of the 1960s had failed (Gross, Giacquinta & Bernstein, 1971; Smith & Keith, 1971).

Marris (1975) articulates that change involves elements of loss, anxiety, and struggle and that the response to change is "characteristically ambivalent" (p. 7). Proposed change brings about new experiences which individuals may not be able to attach a familiar frame of reference--a known reality to them. Resistance, ambivalence, and intolerance pervade the process and individuals begin to preserve familiar, reliable practices, regardless how meaningful the change may be to others. For this reason, Marris argues that change "cannot be assimilated unless the meaning is shared" (p. 121) to all who will be impacted by the innovation. He elevates the implications of shared meaning for those who are in positions to implement change by articulating,

> When those who have power to manipulate changes act as if they have only to explain, and when their explanations are not at once accepted, shrug off opposition as ignorance or prejudice, they express a profound contempt for the meaning of lives other than their own. For the reformers have already assimilated these changes to their purposes, and worked out a reformulation which makes sense to them, perhaps through months or years of analysis and debate. If they deny others the chance to do the same, they treat them as puppets dangling by the threads of their own conceptions. (Marris, 1975, p. 166)

While the ambivalence which pervades the change process cannot be eliminated, it can be managed when individuals' impulses to preserve the familiar and reliable are seen as a means to "consolidate skills and attachments, whose secure possession provides the assurance to master something new" (Marris, p. 22). Those who have power must share that power by assisting others to assimilate the proposed changes and work out a "reformulation which makes sense to them" (p. 166) and not leave individuals suspended

in the midst of their own conceptions of the proposed change.

The period from 1978-82 marks the implementation success phase labeled as such because of "pockets of success . . . coming from a variety of research and practice traditions that were compatible but were arrived at seemingly independently" (Fullan, 1991, p. 6). Studies in school improvement (Hall, Hord, & Griffin, 1980), effective schools (Brookover, 1981; Clark, Lotto & MacCarthy, 1980), and principal effectiveness (Blumberg & Greenfield, 1980; Bossert, Dwyer, Rowan & Lee, 1982) were areas of promising implementation success, but gave way to the fourth phase, intensification vs. restructuring.

The successes noted during the implementation phase were overshadowed in 1983 by *A Nation at Risk* report calling for comprehensive reform and marked the beginning of the intensification vs. restructuring phase from 1983-1990. According to Fullan (1991), reform took two distinctive forms which were alike in their call for comprehensive, systemic change, yet were "philosophically and politically at odds" (p. 7) in their approach. Intensification calls for the following:

> increased definition of curriculum, mandated textbooks, standardized tests tightly aligned with the curriculum, specification of teaching and administration methods backed up by evaluation, and monitoring [which] all serve to intensify . . . the what and how of teaching. (Fullan, 1991, p. 7)

The second type of reform is restructuring. According to Fullan, restructuring involves the following:

> school-based management, enhanced roles of teachers in instruction and decision making, integration of multiple innovations, restructured timetables

> supporting collaborative work cultures, radical reorganization of teacher education, new roles such as mentors, coaches, and other teacher leadership arrangements, and revamping and developing the shared mission and goals of the school. (1991, p. 7)

Sarason (1983) contends that a great deal is being presented about change of and in public schools today, but what is really being called for is change from the present to a past that hardly existed. He describes the discussions on educational policy and changes being proposed as oversimplifications which are void of any understanding of the complexity of the change process. Failure to articulate how those in the school culture will react to, perceive, and transform the reform proposals is a problem. Understanding the complexity of the change process is an area of study by others. Foster (1986) contends that change requires "a raising of consciousness about possibilities by penetrating the dominating ideas, . . . analyzing the possible forms of life, . . . and ask[ing] that we momentarily suspend our heritage and history, particularly as they determine our current structure" (p. 167).

Cuban (1988) argues that the implementation of single innovations does not equate to reform. He categorizes innovations as first-order and second-order changes to explain why some changes are more successful than others. First-order changes are aimed at improving the efficiency, effectiveness, and quality of existing practices without placing distress on the core organizational features of schooling--"without substantially altering the way that children and adults perform their roles" (p. 342). Second-order changes focus on altering the fundamental organizational properties of schools. Like Marris (1975), Cuban (1988) contends that most reform measures are "diverted by the

quiet but persistent resistance of teachers and administrators who, unconvinced, . . . [see] minimal gain and much loss in embracing second-order changes boosted by those who were unfamiliar with the classroom as a workplace" (Cuban, 1988, p. 323). For the most part first-order change experienced some degree of success while second-order change has been severely altered to fit into the existing structure, or have failed. For this reason, Fullan (1991) argues that real change deals more with second-order change "that affect the culture and structure of schools, restructuring roles and reorganizing responsibilities" (p. 29) of all involved in the process of schooling, including students, teachers, and administrators.

Research on the initiation of change shows that the superintendent and other central district administrators are important sources in advocacy, support, and initiation of change (Huberman & Miles, 1984; Lighthall, 1973; Rosenholtz, 1989; Smith & Kieth, 1971). A study conducted by Rosenholtz (1989) included a study of eight school districts which she classified as moving or stuck and found three major differences: (1) the district's relation to school goal-setting and district monitoring, including superintendent learning; (2) principal selection and learning opportunities; and (3) teacher selection and learning opportunities. In school districts classified as moving, superintendents engaged principals in frequent task-focused interactions, including setting district goals and policy development, and in problem resolution. The activities were vague or unstated in stuck districts. Other aspects found in moving districts included regular visits by the superintendent to district schools and participation of the superintendent in learning opportunities about new ideas and practices, while the stuck superintendents showed no initiation of self or others in new learning experiences.

Huberman and Miles (1984) studied 12 school districts and found that in 11 cases district office administrators were sources of decision-making that impacted district-wide changes. Lighthall (1973) analyzed the superintendent's role in Smith and Keith's (1971) case study of the failed implementation of an open-concept elementary school. He contends that the failure of the initiative lies in the superintendent's failure to recognize that change is not about his expressing his reality to be implemented by others, but about exchanging realities. The superintendent's "selection of a one-way form of communication was self-defeating [and] in order for his reality to become part of theirs he would have to have made part of theirs his" (Lighthall, 1973, p. 263). The research of Smith and Keith (1971) and Lighthall (1973) supports the hypothesis that administrative commitment to a singular interpretation of a change is negatively related to the ability to fully implement the change.

Fullan (1991) proposed, "the extent to which proposals for change are defined according to only one person's or one group's reality (e.g., the policy-maker's or administrator's) is the extent to which they will encounter problems in implementation" (p. 36). Schools represent a multiplicity of individuals; therefore, for educational change to be successful, the multiple realities of individuals participating in the change process must be exchanged through an adaptive, supportive leadership function. According to Fullan, repeated "failure to recognize this phenomenon as natural and inevitable has meant that we tend to ignore important aspects of change and misinterpret others" (p. 31). Tending to agree, Heifetz (1994) proposes that reform and change initiatives based on visionary leadership places the leader in the position of salesman, functioning like a magnet lining or drawing iron filings to it. When implementation of *his* vision conflicts

with traditional thinking, followers lose trust and the initiative fails, with blame placed on the visionary leader. In view of Lighthall's (1973) study, failure of the initiative lies in the leader's failure to recognize that change is not about his expressing his reality (or vision) to be implemented by others, but about exchanging realities.

Deal and Peterson (1999) posit that the forces that nudge a culture in one direction or another come from informal and formal leaders articulating purpose and direction through action. It is through controversies that new values and norms are forged. Deal and Peterson articulate that culture, change, and leadership are paradoxes within the work of school leaders and that a paradox cannot be solved in the way a problem is solved. The paradox of change is generated from the need to "embrace change and remain the same . . . balance the status quo with future improvements" (p. 138)--to perpetuate societal values and norms, yet change those norms as information changes.

In summary, one function of public school is to help society change its norms as information changes. The second, and opposing, function of public school is to maintain the norms and values of society. The review of significant literature on change in public schools indicates that the movement is toward continuity rather than change. Schools are perpetuating the existing culture more than they are changing. The concept of perpetuation may provide a greater understanding of change and why it does or does not occur in public schools.

The Concept of Perpetuation

The perpetuation of values and norms helps a society maintain itself. Perpetuation seems to happen easier than change. A theory of perpetuation emerged through the work of Braddock (1980) who studied the segregation of black Americans.

He found that black students who were exposed to desegregated settings were more likely to attend predominately white colleges than those who had not participated in desegregated settings. However, McPartland and Braddock (1981) found that "across the stages of the life cycle and across institutions when individuals have not sustained experiences in desegregated settings" (p. 149), segregation tends to perpetuate itself. Even though black students were exposed to desegregated educational settings and made choices to attend predominately white colleges, the choices they made as they returned to segregated settings fostered the perpetuation of racial beliefs.

Expanding on the findings of Braddock (1980), Wells and Crain (1994) found that minority students who participated in desegregated settings had higher educational and occupational aspirations than those students who had not participated in desegregated settings. Exposure to desegregated settings with culturally different and diverse expectations resulted in different choices by minority students. To better understand the result of the interactions that lead to perpetuation, analysis of social networks can be used. According to Wasserman and Faust (1994), network analysis provides a "precise way to define important social concepts, a theoretical alternative to the assumption of independent social actors, and a framework for testing theories about structured social relationships" (p. 17). The concept of network analysis has been used to identify, examine, and explain the interactions that result in groups. Granovetter (1973) defines these "interactions" between individuals as "ties" and maintains that the strength of ties can be used to explain the diffusion of influence, information and mobility opportunities among individuals.

Granovetter (1973) determined the strength of ties by categorizing them as absent,

weak, or strong. The absence of a tie signifies both the lack of an identified relationship and those without substantial significance and "that two people 'know' each other by name need not move their relation out of this category if their interaction is negligible" (p. 1361). Absent ties are the weakest ties. Granovetter (1973) proposes that weak ties are more likely to connect people to information beyond what they typically had access to through their strong ties. This is due in part to the background differences. He surmises that individuals resist risky activities to a greater degree than safe or normal ones, thereby creating the need for early exposure to and adoption of a proposal prompting it to spread in a chain reaction. Therefore, he proposes that individuals with several weak ties are "best placed to diffuse . . . difficult innovations" (Granovetter, 1973, p. 1367).

Baker (1994) proposes that "similar people know similar things; people who are different--those with diverse backgrounds, travel in disparate social circles, or hold different positions in the organization--know different things" (p. 137). Shared knowledge would signify strong ties, whereas diverse knowledge would signify weak ties. Various experiences are gained from the settings in which individuals participate. Demographic factors such as educational preparation, work experience, gender, and age contribute to the relationships, and ultimately strength of ties (Baker, 1994).

Another relevant study by Rapoport and Horvath (1961) showed that information transmitted through weak ties ultimately reach a larger number of individuals than information sent through strong ties. They found that individuals with strong ties simply pass information to the same people, creating a greater overlapping of ties but less diffusion of information. Information passed through weak ties reached a larger number of individuals; therefore, potential recipients of information are greater when weak ties

exist, making such ties especially useful when diffusion of information is desired. Weak ties are the conduits through which individuals and subgroups become acquainted with socially distant ideas.

Granovetter (1973) contends that "weak ties are . . . indispensable to individuals' opportunities and to their integration into communities; strong ties, breed local cohesion, leading to overall fragmentation" (p. 1378). This perspective of the generative power of weak ties leading to change and strong ties leading to perpetuation have implications for leaders, such as public school superintendents. Granovetter (1973) also addressed leadership concerns stating,

> I propose that whether a person trusts a given leader depends heavily on whether there exists intermediary personal contacts who can, from their own knowledge, assure him that the leader is trustworthy, and who can, if necessary, intercede with the leader or his lieutenants on his behalf. (p. 1374)

Strength of ties research, when applied through leadership practices, has implications for planned perpetuation or change within the organization.

The use of Granovetter's (1973) definition of the "strength" of an interpersonal tie accommodates qualitative analysis. He states, "the strength of a tie is a (probably linear) combination of the amount of time, the emotional intensity, the intimacy (mutual confiding), and the reciprocal services which characterize the tie" (p. 1361). He points out that the set of characteristics is each "independent of the other, though the set is obviously highly intracorrelated" (p. 1361). Kapferer (1969) suggests that multiple content in a relationship signifies a strong tie; however, in some circumstances, ties with only one content or with diffused content may be strong as well (Simmel, 1950).

According to Granovetter (1973), his definition "would show most multiplex ties to be strong but also allow for other possibilities" (p. 1361) that emerged through the empirical information.

Supporting the use of such concepts as time, intensity, intimacy, and reciprocity to identify and explain ties that exist in groups, Baker (1994) articulates that strong ties consist in a large measure of emotional interaction and a history (*time*), high emotional intensity (*intensity*), and shared knowledge and a mutual commitment to a continued relationship (*intimacy*). These elements, when found in scarcity, signify weak ties. Reciprocity was not specifically addressed by Baker (1994); however, Forsythe and Hoy (1978) contend that individuals interact with others out of the need for and expectation of rewards. Mutually rewarding interactions (*reciprocity*) lead to a continued relationship whereas failure on the part of one or both parties to feel rewarded and the relationship will be discontinued. These conditional terms of reciprocity makes it suspect as a viable measure for the strength of ties, especially when used in isolation.

Granovetter (1995) takes exception with some researchers who contend that the frequency of contact (*time*) is not a viable indicator of the strength of ties and is simply the result of contextual factors such as work settings (Fischer, Jackson, Stueve, Gerson & Jones, 1977). According to Granovetter (1973), different perspectives are gained when individuals are asked "whom they *like* best or would *prefer* to do something with, rather than with whom they actually spend time" (p. 1376). In a study of the relationship of frequency of contact and dissemination of information resulting in employment, Granovetter (1995) found that individuals who found their jobs through weak ties saw their contacts "rarely" and this provides "a clear indication of the primacy of structure

over motivation; close friends might indeed have more *disposed* than acquaintances to use influence, but were simply less often in a position to do so" (p. 54). As in earlier work, Granovetter (1973, 1995) stresses the difficulty "to talk precisely about the strength of an interpersonal tie" (p. 53) but acknowledges that even the simple measure of time, which must be present for a tie to exist, provides an indicator of the potential for ties to develop. His notions are supported by Homan (1950) who found that "the more frequently persons interact with one another the stronger their sentiments of friendships for one another are apt to be" (p. 133).

In summary, social networks function because of the relationships or ties that exist between the individuals. Examination of the network of ties comprising a group can be used to determine whether aspects of the groups' structure might facilitate or block perpetuation. Granovetter's (1973, 1995) concept of strong, weak, and absent ties provides a framework in which to identify and examine the strength of ties within the context of time, emotional intensity, intimacy, and reciprocal services. This analysis of relationships, in conjunction with perpetuation theory, is useful in characterizing the "ties" that exist among work group members and relating findings to perpetuation or change of school culture.

Leadership Theories

Literature focusing on school culture and change reflects the repercussions of leadership. Leadership is two sides of the same coin--it can be a force which promotes change within an organization *or* leadership can be a force which resists change and strives to perpetuate the status quo. As the chief executives, superintendents are faced with the dilemma of leading public schools to meet the ever-changing needs of a diverse

society--steeped in tradition; yet, calling for change to keep abreast with the flow of information (Elmore, 1990; Blumburg, 1985). What do leaders pay attention to, measure, and control? How do leaders react to critical incidents and organizational conflict? What criteria do leaders use to allocate rewards and status to others? What criteria do leaders use for recruitment, selection, promotion, and dismissal? According to Sergiovanni (1996), two factors can be found in most theories of leadership: (1) connection of people to each other and (2) connection of people to their work. While connection is a common element, "not all theories emphasize the same kinds of connections" (p. 33). A closer look at the various theories of leadership provides a clearer picture of connections.

Theories based on Trait and Situation

Prior to 1950, the *great man theory* dominated the study of leadership (Mann, 1959). Rooted in the historical writings of Aristotle (n.d./1944), the trait approach is drawn from the belief that "from the hour of birth, some are marked out for subjection, others for rule" (Aristotle, n.d./1944). The notion was to identify distinctive traits that characterize the behaviors of leaders. Stogdill (1948) and Mann (1959) conducted large scale reviews of more than 120 leadership trait studies completed during the first half of this century and concluded that the trait approach produced inconsequential and ambiguous results when used in isolation and contribute little to understanding the phenomenon of leadership. However, later researchers (House & Beatz, 1979; Stogdill, 1974) identified some traits that tend to set leaders apart from nonleaders. Traits consistently linked with leadership are intelligence, self-confidence, high energy level, dominance, and task-relevant knowledge. The study of situational factors emerged in an attempt to distinguish aspects within the organizational setting that are relevant to leader

behavior. Campbell and others (1970) concluded that the leap from using the trait approach to using the situational approach in isolation is restrictive and counterproductive. Similar to the shortcomings of trait theory, a purely situational approach to the study of leadership fails to provide substantial meaning. The need to use multidimensional frameworks to examine the aspects of leadership emerged.

Dimension of Leadership

The Ohio State Leadership Studies attempted to develop a set of objective methods to measure and evaluate leadership (Hemphill & Coons, 1950). Two dimensions of leadership were identified: initiating structure and consideration. Halpin (1956) used these two dimensions to describe the behavior of school superintendents. He defined initiating structures as the leader's behavior used to delineate the relationship between himself and the members of the work group and establishing well-defined structures, channels of communication, and procedures. Consideration was defined as behaviors indicative of friendship, mutual trust, respect, and warmth resulting in a relationship between the leader and other members of the organization.

Stogdill (1963) proposed twelve dimensions of leadership generalized to two components described as *system-oriented* and *person-oriented.* Similarly, others proposed the same concepts using different labels, such as, *employee-orientation* and *job-centered* (Likert, 1961), *initiating structures* and *consideration* (Halpin, 1956), and *nomothetic* and *ideographic* (Getzels & Guba, 1957). Merton (1969) concluded, "Leadership does not, indeed cannot, result merely from the individual traits of leaders; it must also involve attributes of the transactions between those who lead and those who follow. . . . leadership is, then, some sort of social transaction" (p. 2615).

Managerial Grid Theory

Blake and Mouton (1964) developed the Managerial Grid useful in identifying the alternatives available to an administrator for improving effectiveness as a leader. The grid has two basic dimensions: *concern for people* and *concern for production*. The interactive use of the two dimensions influences the leader's thinking, feeling, and action. Concern for people refers to interpersonal relationships that stress the personal worth of individuals--their self-esteem. Concern for production refers to a concern for initiatives the organization engages its people to accomplish. Each axis represents a nine-point scale, with one being minimum concern and nine designating maximum concern. The vertical axis depicts the concern for people and the horizontal axis depicts concern for production. Theoretically, the grid presents the possibility of mapping eighty-one leadership styles. A 9,9 pattern of leadership represents the participative team approach and is characterized by a high concern to achieve organizational goals and maintaining a high level of morale. This dimension is considered most desirable for its effective integration of concern for both task and people. The 9,1 pattern represents task oriented leadership, with high concern for task accomplishment and low concern for people. When conflict occurs in the organization, the task oriented leaders in this dimension drive themselves as well as others. Pattern 1,9 is relationship oriented leadership with low concern for task and high concern for people. Maintaining good relationships with others is the primary concern. The leader offers help but does not lead. The 1,1 pattern represents the most impoverished leadership style with low concern for both task and people. A balanced leadership pattern is found in the 5,5 dimension, which is characterized by accommodating, balancing, and maintaining the status quo, neutralizing

the needs of both organization and people. The Managerial Grid provides an array of useful conceptual perspectives from which to study leadership patterns. The leader can modify the causal variables of (1) organizational climate, (2) supervisory leadership, and (3) organizational structure. The causal variables shape the internal conditions of the organization, such as, attitudes, motivations, and loyalties.

Like Blake and Mouton (1964), Reddin (1971) proposes a 3-D Theory of Leadership of managerial effectiveness. Reddin's model identifies and defines three dimensions: task orientation--the extent that a manager directs workers' efforts toward goal attainment; relationship orientation--the extent that a manager initiates interpersonal relationships with workers characterized by mutual trust, respect, and consideration; and effectiveness--the extent that a manager gets individuals to meet required task productions. The 3-D grid identifies four basic leadership styles which can be appropriately or inappropriately used and leads to eight managerial or leadership styles: executive--effective integrated; compromiser--ineffective integrated; bureaucrat--effective separated; deserter, ineffective separated; benevolent autocrat--effective dedicated; autocrat--ineffective dedicated; developer--effective related; and missionary--ineffective related. Reddin augmented the grid approach by factoring in the concept that different situations require different styles and that the effectiveness of a style depends upon an appropriate match of basic style to situation.

Hersey's and Blanchard's (1977) Tri-Dimensional Leader Effectiveness Model of Leadership is similar to Reddin's (1971) model. An element of the Tri-Dimensional Model is its emphasis on the importance of characteristics of subordinates in selecting a leadership style. The maturity level of the group members is a critical factor in the

situation that determines the effectiveness of the leadership style. The Tri-Dimensional Model asserts that the maturity level of organizational members can be increased over a period of time and as maturity increases, an effective leadership style will be characterized by a reduction in task-oriented behavior and an increase in relationship-oriented behavior.

Contingency Theories of Leadership

Contingency theories maintain that leadership effectiveness depends on the fit between personality traits of the leader and situational variables, such as task structures, position power, and subordinate skills and attitudes. The contingency theory of Fiedler (1967) and Vroom's and Yetton's (1973) Normative Contingency Theory are widely known contingency approaches to leadership.

Feidler's Contingency Theory of Leadership. In an effort to measure the leader's motivation, Fiedler (1967) developed the Least Preferred Coworker (LPC) scale. He asked participants to describe specific attributes of an individual with whom they have been able to work least well in getting a job done. Three factors related to situational favorableness include quality of leader-follower relationships; degree the task is well structured; and positional power of the leader. The factors of situational favorableness can be arranged in eight possible combinations spanning from very favorable to unfavorable. Fiedler's (1967) model, when applied to predict the leadership effectiveness of principals in elementary school settings (Martin, Isherwood, & Lavery, 1976; Williams & Hoy, 1973), supported the theory. In favorable situations, ones where principals are supported by their faculty, a task-oriented style is associated with group effectiveness. In moderately favorable situations, ones where principles are less well supported, a slight

tendency for a relationship-oriented style is associated with school effectiveness. Essentially, Fiedler's (1967) model tells us that "leadership performance depends then as much upon the organization as it depends upon the leader's own attributes" (p. 261). Rather than viewing leaders as effective or ineffective, the effort should be to increase organizational and group effectiveness by training leaders to be more effective, and also to build an organizational environment in which the leader can perform well.

Vroom's and Yetton's Normative Contingency Theory. Victor H. Vroom and Philip W. Yetton (1973) go beyond suggesting the appropriateness of leadership styles in context with various situational contingencies and attempt to specify how the leader "ought to" behave to assure organizational effectiveness. Unlike Blake's and Mouton's (1964) prescriptive model, Vroom's and Yetton's model is normative in that it attempts to tie leader behavior to specific situational contingencies. The hypothesis is that some situations need autocratic decision makers and others need consultative or participative decision makers. The model consists of a taxonomy of five leadership styles, ranging from the leader deciding to the leader sharing the problem and solution with the group. The behavior styles are described in behavioral terms--autocratic (AI & AII), consultative (CI & II), and group (GII). One style is not more highly valued than others; however, the flow of the taxomony implies a logical basis for employing certain leadership styles for maximum effectiveness under specific circumstances. Leadership style is evident in a range of possible behaviors that the leader "ought to" choose to apply. Analysis of the contingencies in specific situations and then behaving in the most appropriate manner becomes problematic for the leader.

Transactional Theories

Exploring the interactions between leaders and followers, transactional theorists argue that leaders influence their followers; however, they are under their followers' influence also--the process is reciprocity (Burns, 1978; Rost, 1991). Overlapping the situational approach, the transactional perspective places emphasis on the institutional forces that influence leadership behavior. Leader influence is earned through adjusting to follower expectation. The leader gains status and influence in exchange for reducing uncertainty and giving followers a platform for actions (Hollander, 1978). Proponents of the transactional perspective focus on how influence is gained and maintained; however, lacking in the perspective, is the purpose of influence or the way purpose is derived. Contradiction arises in transactionalists' view of themselves as value-neutral, whereas, by viewing leadership as influence over outcomes is in itself value-laden (Rost, 1991).

Leadership Theories for Collective Purpose

Who are the leaders and who are led? Who is leading whom to where? For what purpose? With what results? These questions are the basis of leadership theories focusing on collective purpose. This portion of the literature review will present four such works: Burns (1978), Schein, (1992), Heifetz (1994) and Sergiovanni (1996). First, however, the work of two early researchers, Chester Barnard (1938) and Philip Selznick (1957), will be reviewed briefly to affirm that the notion of pedagogical leadership to promote collective purpose is grounded in early and repeated works. Secondly, a working definition for the term "pedagogy", will be presented from the views of Max Van Maanen (1991).

Barnard's (1938) Authority-Communication Theory proposes that organizations

are people systems, and as such, "the first function of the executive is to develop and maintain a system of communication" (p. 1). Barnard outlined effective communication systems as those in which natural groups from within the organization affect what happens, upward communication is vital, authority is generated from below rather than above, and leaders function as a cohesive force for collective purpose.

Philip Selznick's (1957) Theory of Institutional Leadership posits that institutions are more effective in providing for the needs of members and in achieving purposes. He sees organizations as being composed of standard building blocks conducive to manipulation by administrators practicing generic theories, concepts and skills which are interchangeable among organizations and compromise their individual integrity and character. Organizations are designed or engineered to be managed. On the other hand, institutions are unique in their purposes, structures, and practices because goals are not so clear-cut. This "institutional embodiment of purpose" (Selznick, 1957, p. 138) stems from the infusion of values, producing and maintaining integrity, and character. Selznick (1957) states,

> The inbuilding of purpose . . . involves transforming men and groups from neutral, technical units into participants who have a peculiar stamp, sensitivity, and commitment. This is ultimately an educational process. It has been well said that the effective leader must know the meaning and master the techniques of the educator. The leader as educator requires an ability to interpret the role and character of the enterprise, to perceive and develop models for thought and behavior, rather than merely partial perspectives. (pp. 149-150)

Leadership as an educational process requires one to practice leadership as a form

of pedagogy--not in the vague sense expressed as curriculum or instruction but embodied in the origin of teaching. Max Van Maanen (1991) explains,

> The term pedagogue derives from the Greek, and refers not to the teacher, but to the watchful slave or guardian whose responsibility it was to lead (agogos) the young boy (paides) to school. . . . The adult had the task of accompanying the child, of being with the child, of caring for the child. The pedagogue would be expected to see to it that the child stayed out of trouble, and behaved properly. This is a kind of 'leading' that often walks behind the one who is led. The slave or pedagogue was there *in loco parentis.* (p. 37)

Practicing leadership as a form of pedagogy has associated with it the sense of accompanying others in such a way as to provide direction and care. It requires leaders to help others grow out of behaviors which have become ineffective and grow into behaviors that help procure shared meaning and interests. Others (Burns, 1978; Heifetz, 1994; Schein, 1992; Sergiovanni, 1996) have explored the notion of collective purpose and articulated a theory of leadership as a form of pedagogy (the act or practice of teaching). Each is outlined in the text to follow.

Transformational Leadership Theory. Viewing leadership as more than transaction based on authority or influence, Burns (1978) presents a theory of transformational leadership in which social goals meet the needs of followers and elevate followers to a higher moral level. He posits that as the needs for survival and security are met, people can and will concern themselves with socially useful purposes that serve the common good and serve others. According to Burns (1978), "Leadership is the reciprocal process of mobilizing, by persons with certain motives and values, various economic,

political, and other resources, in a context of competition and conflict, in order to realize goals independently or mutually held by both leaders and followers" (p. 425).

Burns (1978) emphasized the symbiotic relationship between leadership and followership. This is contrary to Schein's (1992) characterization of a learning culture which indicated that the ideal dimension for the organization-environment relationship is organization dominant, not environment or symbiotic. Schein contends that the symbiotic relationship will produce more difficulty in learning as the environment becomes more turbulent (p. 364). The more turbulent the environment, the more critical it becomes for leaders to argue for and gain some level of control over the environment. Burns points out that while leaders do exercise various kinds of power, transformative leaders engage with followers in seeking to achieve not only their own goals but also significant goals of the followers. "Leadership over human beings is exercised when persons with certain purposes mobilize, in competition or conflict with others, institutional, political, psychological and other resources so as to arouse, engage, and satisfy the motives of followers" (Burns, 1978, p.18). Leadership is distinguished from the exercise of naked power over others, wherein there is no mutual engagement. He distinguishes between power and leadership. Power is an act to control things, such as technology, mineral resources, money, energy. "Power wielders may treat people as things. Leaders may not" (p. 18). This psychological approach views power as a relationship involving not only the purpose or intention of the holder but of the receiver also. Therefore, power is a collective decision, not simply the behavior of one. Burns (1978) explains the power process as one

in which power holder (P), possessing certain motives and goals, have the

> *capacity to secure changes in the behavior of a respondent (R), human or animal, and in the environment, by utilizing resources in their powerbase, including factors of skill, relative to the targets of their power-wielding and necessary to secure such changes.* (p. 13)

From Burns' (1978) perspective change is directly related to three elements: 1) the motives and resources of power holders; 2) the motives and resources of power recipients; and 3) the relationships among these elements. Within this view, implication for leadership emerges from within the relationship realm.

Cultural Leadership Theory of Perpetual Learning. Schein (1992) explains collective purpose as the dynamic process of culture creation, culture evolution, and culture management which are "the essence[s] of leadership and makes one realize that leadership and culture are two sides of the same coin" (p. 1). Schein proposes a leadership theory based on culture and change through perpetual learning. His notions of culture and change are critical to articulating his leadership theory. Culture is defined as:

> A pattern of shared basic assumptions that the group learned as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems. (Schein, 1992, p. 12)

He posits that the shared assumptions become powerful defining property of the group known as "values". Once formed, values derive their power from the fact that these shared assumptions "begin to operate outside of awareness" (p. 12) becoming "psychological cognitive *defense mechanisms*" (p. 23) that actually guide individual and

group perception, thinking, and feeling. This phenomenon presents implications for leaders, possessing formal and informal authority, who plan to act in ways other than to maintain the status quo. According to Schein (1992), the dynamics of change lies in leadership practices which illuminate conflicting assumptions within the stable portions of the group's cognitive structures, causes a state of discomfort, disequilibrium, and anxiety. Lewin (1947) referred to this process as *unfreezing*, which creates a motivation to change. The need for cognitive stability creates a situation amenable to learning--what is learned will be influenced through the concept of leadership. This cognitive restructuring occurs once "an organization has been unfrozen" (Schein, 1992, p. 301). Once the new behaviors and set of cognitions produce confirming data to the group, discomfort and disequilibrium are reduced--refreezing occurs. Ultimately, the challenge to leadership is "deciphering cultural assumptions and evaluating their relevance" (Schein, 1992, p. 149), along with disrupting embedded routines that interfere with the adaptiveness of group culture.

Schein (1992) presents a paradox. Culture is a stabilizing, conservative force which makes things predictable, yet, he proposes a conceptual normative framework outlining characteristics of a learning culture to encourage and allow for perpetual learning and change. From multiple dimensions for each characteristic, a "hypothesized ideal location for learning to occur on a continuing basis" (p. 364) has been established. The role of leadership becomes learning-oriented to promote the ideal dimensions of the learning culture. The characteristics of a learning culture and their ideal dimension include: (1) organization-environment relationship is organization dominant, (2) nature of human activity is proactive, (3) nature of reality and truth is pragmatic, (4) nature of

human nature is that humans are basically good and human nature mutable, (5) nature of human relationships is individualism and collegial/participative, (6) nature of time is near-future oriented and long time units, (7) information and communication are fully connected, and (8) subcultural uniformity versus diversity is high diversity.

Schein (1992) outlines the critical roles of leadership as strategy formulation and implementation. The components are:

> (1) to perceive accurately and in depth what is happening in the environment, (2) to create enough disconfirming information to motivate the organization to change without creating too much anxiety, (3) to provide psychological safety by either providing a vision of how to change and in what direction or by creating a process of visioning that allows the organization itself to find a path, (4) to acknowledge uncertainty, (5) to embrace errors in the learning process as inevitable and desirable, and (6) to manage all phases of the change process, including especially the management of anxiety as some cultural assumptions are given up and new learning begins. (Schein, 1992, p. 383-384)

Ultimately, he proposes a cultural leadership theory of perpetual learning in which leadership is defined in terms of the role, not position. The practice of leadership culminates in the leader's use of formal and informal authority to work with others in an adaptive process to create and modify culture. Neither is leadership reserved for formal authority alone, leadership based in informal authority can occur anywhere within the culture.

Community Leadership Theory. Thomas Sergiovanni (1996) proposes a theory of community "organized around relationships and ideas" (p. 47). Rather than relying on

external control and formal systems of supervision, leadership in communities relies on "norms, purposes, values, professional socialization, collegiality, and natural interdependence" (p. 48) to connect members to each other and to their work. Sergiovanni builds on Selznick's (1957) theory that "infused with value," (p. 40) schools-as-organizations become schools-as-communities restoring integrity and character. Similar to Burns' (1976) transformational leadership theory which elevates both leader and followers, community leadership theory is building a "shared followership and the emphasis . . . is not on who to follow, but on what to follow" (p. 83). Leadership becomes idea-based and followership becomes moral connections as members respond to substance. These moral connections cannot be commanded by hierarchy or sold as visions of charismatic personalities, but are the result of mutual obligations, shared traditions, and other normative purposes. "Leadership for meaning, leadership for problem solving, collegial leadership, leadership as shared responsibility, leadership that serves school purposes, leadership that is tough enough to demand a great deal from everyone, and leadership that is tender enough to encourage the heart--these are the images of leadership we need for schools as communities" (Sergiovanni, 1996, p. 184-185).

Adaptive Leadership Theory. Ronald Heifetz (1994) presents an adaptive leadership theory with features similar to the others presented in this section. Like Burns (1978), Schein (1992), and Sergiovanni (1996), Heifetz's work stems from the cognitive perspective that cultures change through engaging people in learning. He shares Burns' (1978) view that as the needs for survival and security are met, people can and will concern themselves with socially useful purposes that serve the common good and others.

Heifetz articulates a leadership framework based on the belief that societies "can respond to new pressures with deliberation and planning, . . . generat[ing] purposes beyond survival" (p. 30-31). He defines problems as "the disparity between values and circumstances" (p. 35). This disparity presents an adaptive challenge which "is a particular kind of problem where the gap cannot be closed by the application of current technical know-how or routine behavior" (p. 35). Progress occurs when "invention and action change circumstances to align reality with values . . . [and] the values themselves may also have to change" (Heifetz, 1994, p. 35). Change creates conflict and stress in people systems, producing a natural response to restore equilibrium. Yet in a state of equilibrium, status quo is maintained and nothing new is created--change does not occur.

Accomplishing adaptive change within a people system, like school, requires sustained periods of disequilibrium (Heifetz, 1994). The group's ability to function during these sustained periods of disequilibrium defines the adaptive capacity of its people. Heifetz (1994) posits that in order for change to occur, ongoing adaptive capacity must be generated through "a rich and evolving mix of values to inform a society's process of reality testing . . . [and] requires leadership to fire and contain the forces of invention and change, and to extract the next step" (p. 35). Adaptive work defines leadership consisting not of technical answers or secured visions but of taking action to illuminate and clarify values.

Heifetz (1994) presents a framework in which leadership can be viewed through the lenses of technical problem and adaptive challenges. Technical problems are those problematic situations for which there are known answers or solutions. An adaptive challenge presents itself when there is a disparity between the shared values people hold

and the realities they experience. Adaptive challenges provide learning situations that require people to discover, invent, and take responsibility. The learning required to achieve adaptive work is not merely conceptual. "The leader as educator has to engage the parties in a process of inquiry that accounts for their fears and pain, if learning is to be produced" (Heifetz, 1994, p. 245). The key is to focus people's attention on the cause as the source of the problem--not the leader as the source of the problem. Engaging leadership differs from simple rote learning situations with the answer supplied and paced by the leader.

According to Heifetz (1994), "leadership is a special sort of educating in which the teacher raises problems, questions, options, interpretations, and perspectives, often without answers, gauging all the while when to push through and when to hold steady" (pp. 244-245). Loss must be calculated carefully because people are limited in the losses they are willing to sustain. Adaptive change generates distress which demands leadership with compassion in order to respect people's basic needs for direction, protection, and order. The greater the trust in relationships, the greater the adaptive capacity of people. Pacing the work becomes critical and requires clarifying the issues on which to focus attention, framing the issues, and managing the flow of information. Informal authority in the group helps the leader monitor the distress during adaptive change. Change is about letting go, "a leader has to help people let go" (p. 248). Heifetz (1994) presents a diagnostic framework outlining the strategic principles of leadership: "identifying the adaptive challenge, regulating distress, directing disciplined attention to the issues, and giving the work back to people (p. 254)." An adaptive challenge presents itself when there is a disparity between the shared values people hold and the realities they

experience. Regulating distress to minimize the degree of disequilibrium is vital when mobilizing people to meet adaptive challenges. Diverting attention from the real problem becomes the efforts of some. Heifetz refers to this as work avoidance which is an effective means some group members have learned to avoid dealing with the tough issues. Redirecting the group's attention back to the issues is a diagnostic function of leadership.

Another diagnostic function is distinguishing ripe from unripe issues. Ripe issues have already gained the focus of attention and generated urgency. The challenge becomes one of keeping attention focused on the issues requiring adaptive work by the group. Heifetz (1994) calls this effort "giving the work back to the people . . . [and] frequently takes the form of orchestrating conflict" (p. 262). Adaptive work requires the engagement of groups with competing interests. These multiple interests require leadership to identify the issues; comprehend the stakes and potential losses within the group; recognize the kinds of changes that group members need to make for joint progress to be made; and identify the relevant participants, the nature of their adaptive work, and the perils of shielding them from their responsibility. "Defining purposes are the single most important source of orientation in doing both technical and adaptive work" (Heifetz, 1994, p. 274). Adaptive work requires leaders and followers working as partners to utilize their formal and informal authority. Mobilizing people to do adaptive work is the challenge of leadership. The success of leadership lies in the leaders ability to pacing the work according to the people's ability to endure.

During periods of disequilibrium the role of the leader is one of "holding the environment" (p. 250) which Heifetz (1994) describes as a process of controlling conflict

and reassuring followers. He contends that leadership is about the ability to mobilize people and community to face their problems and resolve them. "Leadership requires a learning strategy . . . to engage people in facing the challenge, adjusting their values, changing perspectives, and developing new habits of behavior" (p. 5).

In summary, various leadership theories have been articulated to explore how people are connected to people and how people are connected to their work. The trait or *great men* theory has dominated the leadership literature from the nineteenth century. Situationalists argue that characteristics within the environment or situation determine the leadership needs and focus on how leadership approaches differ within various contexts. Synthesis of the trait and situation theories brought about contingency theory which posits that the trait or style of the leader needed is contingent on the requirements of the situation. Problematic is the task of diagnosing context which is central to leadership approaches. The literature on school culture presents theories based on collective purpose and defines leadership as a cognitive process, a form of pedagogy in which leaders engage members of a collective to face tough issues and resolve them.

Summary

Schools are organized social structures that are culturally constructed to perpetuate the instruction of societal values and norms to its youth and to help society change its norm as information changes. Traditional cultural norms are challenged when change is proposed. Understanding the nature of culture within schools helps leaders realize the internal and external forces which drive them and the factors which permit and constrain change within them. The literature presents multiple perspectives from which to view culture, with the variable and cognitive perspectives presenting the most promise

for change and the holistic perspective being the most resistant and difficult to change. The review of significant literature on change in public schools indicates that the movement is toward continuity rather than change.

Network Analysis helps identify and explain the relationships or ties among individuals. Strong ties result in perpetuation of ideas, values, and beliefs (shared knowledge) and ultimately perpetuate the existing culture. Weak ties offer the possibility of change through introduction to diverse knowledge and cultures. Perpetuation Theory supports this notion.

Various leadership theories are cited in the literature and often serve as a foundation or launch pad for the formulation of emerging theories. The two factors found in most theories of leadership address issues of connecting people to each other and connecting people to their work. While connection remains a common element among theories, differences emerge in the kinds of connections needed. Heifetz (1994) contends that how work is defined and operationalized and how individuals are assigned to groups to accomplish work determines perpetuation or change within the organization.

Heifetz's (1994) leadership theory, Network Analysis (Granovetter, 1973, 1976, 1995), and Perpetuation Theory (Braddock, 1980; McPartland & Braddock, 1981; Wells & Crain, 1994) provide a perspective from which to study the impact of superintendents' practices on the perpetuation or change of school culture.

CHAPTER III

DATA PRESENTATION

Using the lenses of Heifetz (1994) leadership theory, Network Analysis (Granovetter, 1973, 1976, 1995) and Perpetuation Theory (Braddock, 1980; McPartland & Braddock, 1981; Wells & Crain, 1994), the purpose of this study was to examine superintendents' leadership and its connection to the perpetuation and change of school culture. Collection of empirical information focused on the superintendents' definition and operationalization of curriculum work and the social networks within a curriculum work group in the district. Three school districts were selected for the study based on their efforts to develop the curriculum through the use of work groups assigned by the superintendents. The empirical information collected for each district is presented in this chapter. The purposes of empirical data collection, presentation, and analysis were to characterize the "work" (Heifetz, 1994) in the curriculum as defined, operationalized, and assigned by the superintendent and "ties" (Granovetter, 1973) among a curriculum work group in the district; to cast the findings against the literature on Perpetuation Theory (Braddock, 1980; McPartland & Braddock, 1981; Wells & Crain, 1994); and to speculate on the relationship of work and ties to perpetuation and change of school culture. Determining the effectiveness of the work or the ties was not a part of this study.

Case Study Procedures

An explanatory case study method of inquiry (Yin, 1984) was employed to research the problem. Naturalistic inquiry focuses meaning on the context through the

process of observing, recording, analyzing, reflecting, dialoguing, and rethinking (Merriam, 1988). Heifetz's (1994) categorization of "work" as technical or adaptive was used to explore how superintendents define, operationalize, and assign curriculum work in their districts. Network Analysis was used to investigate the relationship among members assigned to work groups and determine the strength of those relationships or ties. A "tie" (Granovetter, 1973) has been defined as an interaction between two individuals. Granovetter (1973) maintains that ties are identifiable, can be categorized as strong, weak, or absent and are useful in predicting cultural perpetuation or change.

Case study procedures included interviewing the superintendent of each district to determine how he defined and operationalized the curriculum work within the district, securing a list of members of one curriculum work group assigned by the superintendent, surveying members of the work group to identify ties within the group, interviewing selected work group members to clarify information gained through the survey instrument, and gaining demographic data from respondents.

Case Study Sites

The studies were conducted in three school districts with a student population between one thousand and two thousand in pre-kindergarten through twelfth grade. Two studies were conducted in rural communities and one in a metropolitan area. Sites were selected based on their grouping of individuals for the purpose of curriculum study and development. Each site was assigned a fictitious name which was used throughout the presentation of the empirical data. The sites are Granville, Sutterville, and Witteville.

Respondents

The respondents included the superintendent of each school district and members

of a curriculum work group assigned by him. Superintendents were contacted by telephone (Appendix B) to gain their willingness to participate in the study and provide a list of members of a curriculum work group assigned by them. Work group members were contacted through a letter requesting their participation (Appendix B). All participants were informed that all information would be protected for confidentiality of the respondents. Pseudonyms were assigned to each participant. The names of the participants from Granville began with the letter G, those from Sutterville began with S, and those from Witteville began with W.

Interviews

The superintendents were contacted by telephone to set up an interview at a time and place of their choice. All three superintendents opted to be interviewed in their offices. Each interview began with an informal gathering of background information, followed by a more structured discussion of their views of the curriculum work occurring in the district. Interview questions focused on the individual superintendent's definition of curriculum work, how that work was operationalized within the district, and how individuals were assigned to groups to carry out the work (Appendix C). The initial interviews with each superintendent ranged from one and one half to two hours.

Follow-up interviews with superintendents were conducted to clarify information and to gain their feedback from the initial interview transcript. Follow-up interviews were conducted by phone, recorded, and transcribed. Each superintendent was provided a copy of the transcription of his interview to review for content accuracy. Each was asked to respond to any statement that he wished to remove, change, or expand. Information gained from the follow-up interviews and superintendents' responses to the interview

transcripts clarified existing empirical data, but provided no new information.

Selected members of the curriculum work groups were interviewed as a follow-up to information gained from the survey and demographic instruments. The follow-up interviews were conducted by telephone and focused on clarification and expansion of the responses gained from the survey. This allowed respondents to focus and give concise information about their relationships with members for whom they had reported ties on the survey instrument. The follow-up interviews produced information useful in describing and clarifying the existing ties between individuals. Granovetter's (1973) four characteristics to measure ties (time, intensity, intimacy, and reciprocity) were used to guide questioning during the follow-up interview. Empirical information gained from the follow-up interviews with survey respondents clarified existing data and, in some instances, provided new information about the relationship patterns of some respondents.

Interview techniques of probing, follow-up, restating, and wait-time were used to gain descriptive data from respondents. I saw the reciprocal value of simultaneously collecting and analyzing information and continued this process until no new information emerged.

Survey and Demographic Instruments

Members of the curriculum work groups were asked to complete a survey instrument and demographic information sheet (Appendix D). A cover letter and consent form (Appendix B) were hand delivered to work group members or placed in their school mailboxes, providing members information about the study and data requested from them. This process was deemed as the least intrusive way to collect information from work group members and was approved by the superintendents as workable for

participants.

The survey instrument asked participants to describe their relationship with other group members by selecting from a list of eight descriptions: (l) teach in the same grade, (2) teach in the same subject area, (3) teach in the same building, (4) socialize with outside of school, (5) belong to same civic or religious organization, (6) grew up in the same community, (7) related to, and (8) other, for respondents to add descriptors, they deemed valuable to the study. They were asked to list all descriptors that applied to each member and to estimate the amount of time they were in contact with each member using D for daily, W for weekly, and M for monthly.

The demographic information sheet asked respondents to identify degrees earned and institutions where earned, current position and number of years there, areas of certification, previous work experience in education, and work experience other than education. Information gained from the survey and demographic instruments was used to determine relationship patterns of individuals assigned to curriculum work groups.

Reporting

Empirical information collected on the superintendents' definition, operationalization, and assignment of curriculum work in the district and the social networks within a curriculum work group assigned by the superintendent was presented in two sections: (1) superintendent interview data and (2) work group survey data. Demographic information was reported in the sections to which they apply.

The first section, superintendent interview data, reports the empirical information from the three interviews with superintendents to examine how they define, operationalize, and assign curriculum work in the district. Each interview is presented in

three parts: (1) interview setting, (2) superintendent's demographics, and (3) curriculum work defined, operationalized, and assigned. The second section, work group survey data, reports the relationships or ties identified between members of a curriculum work group assigned by the superintendent.

Superintendent Interview Data

This section reports the empirical information from each of the three superintendents interviewed. Each interview is presented in three parts: (1) interview setting; (2) superintendent's demographics; and (3) curriculum work defined, operationalized, and assigned. Empirical information was categorized using the components of technical and adaptive work (Heifetz, 1994): (1) *easily defined* or *elusive*; (2) *defined by one* or *group*; (3) *defined and operationalized using known answers* or *new learning*; (4) *operationalized to "fix" the problem* or *resolve issues through problem definition, implementation, and evaluation entwinement*; and (5) *timed to quickly reduce distress or maintain a productive level of distress over an extended period of time.* According to Heifetz (1994), how work is defined and operationalized are interrelated to the degree that a description of one tells a great deal about the other. Overlapping of descriptions was a significant factor in analysis. Empirical information has been synthesized to accommodate reporting and analysis of significant indicators of technical and adaptive work components.

Granville Superintendent Interview

Granville Public School, the focus of the first case study, serves a rural community and has a school population of approximately 1660 students. Five ethnic groups were represented at Granville. Forty-six percent of the population was white, 49

percent American Indian, 4 percent African American, 1 percent Hispanic, and less than 1 percent Asian.

The district is composed of five school sites housing pre-kindergarten through twelfth grade with the following enrollment and grade assignment: Primary with 432 students in grades PK-2, Upper Elementary with 405 students in grades 3-5, Middle School with 368 students in grades 6-8, High School with 420 students in grades 9-12, and Special Education Co-op with 35 students in grades PK-12. The district's administrative building was centrally located away from any of the other school sites and housed the superintendent and district clerical personnel. The district has 122 professional staff assigned accordingly: Primary - 30; Upper Elementary - 27; Middle School - 23; High School - 36; Special Education Co-op - five; and District Office - one.

Empirical data from the initial and follow-up interviews with Mr. Gray are reported in three parts: (1) interview setting, (2) superintendent's demographics, and (3) curriculum work defined, operationalized, and assigned.

Interview Setting. The Granville superintendent, Mr. Gray, was interviewed in his office in the district's administration building located in the downtown area of the community. The building was purchased by the district during the former superintendent's tenure and had undergone some renovation. The administration building is located in close proximity to the school sites, with two sites being within two blocks, one site within six blocks and two sites being less than one mile.

Visitors to the district office park in an alley and enter the building through a front entrance facing a busy street. The front entrance opened to a large waiting area which was furnished with comfortable seating for approximately twenty-five people. The area

was arranged much like a doctor's waiting room with separate seating pods, end tables with lamps and abundant reading material, and a television mounted from the ceiling in one corner. Office clerical staff worked at work stations behind a tall counter running the full length of the room. Windows were provided for visitors and patrons to make inquires and transact business. The door to the superintendent's office was close to the front entrance at the front of the waiting room. At the other end of the waiting room, a hallway led to two offices, lounge area, restroom and back entrance which opened to the parking lot behind the building.

The interview took place around the table in the superintendent's office. The superintendent's office was arranged with spacious bookshelves behind a large desk, supporting visible signs of work being done, but was neat and free of clutter; one high-back chair behind the desk and two in front and facing the desk; a large table surrounded by twelve swivel armed chairs at one end of the office; and wall decorations, primarily consisting of pictures depicting the state's history and Native American culture. During the interview it was learned that the large table and chairs in the superintendent's office were moved to the spacious waiting room to accommodate board of education meetings on a monthly or scheduled basis.

Superintendent's Demographics

Mr. Gray has a Masters degree in special education from a university in England. He holds certification in superintendent, elementary principal, and mentally handicapped. Work experience in education included: three years as teacher of special education in an out of state school district, three years as teacher of special education in state, two years elementary principal, twelve years assistant superintendent, and four years superintendent.

His educational work experience of twenty-four years has been accumulated in three school districts, the past four in his current position as superintendent. Mr. Gray reported no work experience other than education.

Curriculum Work Defined, Operationalized, and Assigned.

Following a brief period of gathering demographic information about the school district, the superintendent, Mr. Gray, was asked to talk with me about the curriculum work in the district. The empirical information gathered from Mr. Gray, described how he defined, operationalized, and assigned the "work" of the district in the area of curriculum.

Those descriptors were sorted into the components of technical and adaptive work: (1) *easily defined* or *elusive*; (2) *defined by one* or *group*; (3) *defined and operationalized using known answers* or *new learning*; (4) *operationalized to "fix" the problem* or *resolve issues through problem definition, implementation, and evaluation entwinement*; and (5) *timed to quickly reduce distress* or *maintain a productive level of distress over an extended period of time.*

Regarding curriculum issues being viewed as *easily defined* or *elusive*, information revealed numerous citations where Mr. Gray referred to defining curriculum as a process requiring input from a variety of people and time. His descriptions were filled with clues indicating that he viewed curriculum definition as elusive. Course articulation agreements were developed by teachers working in grade level groups to identify and define the essential skills for each grade. Mr. Gray recalled that issues arose when teachers needed to work in cross-grade level groups to articulate the curriculum in a meaningful flow. He expressed that the process was "good, because of the compromise

that had to result"

(9-28-99) among teachers as they talked about what they thought should be taught and had to give reason why essential skills should be taught in one grade or another. According to Mr. Gray, the importance of what they were doing collectively had "eluded many of them until now" (9-28-99).

Another indicator of how Mr. Gray defined the curriculum work could be seen in his efforts to engage teachers in a cross-district network to "combat teacher isolation" (9-28-99) by providing teachers an opportunity to "dialogue with teachers from other districts on how to improve instruction" (9-28-99) in their subject or grade. Working with the principals and administrators from two other districts, one teacher from each grade level was identified that reportedly "had the respect of others, was comfortable in the presentation setting, was open to ideas, had good rapport with the staff and would disseminate ideas to their colleagues" (Gray, 9-28-99). Selected teachers became members of the district instructional improvement committee and met monthly with teachers from other districts to learn about new approaches and discuss the implication for use with their students.

Mr. Gray concluded that after one year, the conversations were becoming extremely beneficial, the dialogue had evolved from a closed process to one where openness for ideas and expression occurs without fear of offending others. Indicators from the interview data primarily described the elusive nature of work in the curriculum area. Empirical information indicates that Mr. Gray was searching for ways to better define the curriculum work in the district, indicating he viewed the definition of "work" as *elusive*, a component of adaptive work (Heifetz, 1994).

Responding to the question of what he brought to the district in the area of curriculum, Mr. Gray replied, "The process of sharing, that being what we are trying to accomplish and . . . ways we can accomplish this sharing" (9-28-99). He felt that teachers and administrators determine the work to be accomplished in the district, within the "limits of what is given to us from the legislators and State Department of Education" (9-28-99).

Regarding curriculum issues being *defined by one or group*, Mr. Gray described curriculum work as a process that involved all of the teacher, administrators, and staff in the district and listed the high involvement of everyone as a "major asset of the process" (9-28-99). The process he described included details of how teachers were grouped to work in grade and content groups as well as cross-grade and cross-content group to develop, evaluate, and adjust the curriculum of the district.

Working in the multiple group configurations, teachers "reached a consensus about the essential skills" (Gray, 9-28-99) needed by students at each grade level or in each content area taught. Group consensus materialized as the grade or course articulation agreements were hammered out, representing the views of the collective teacher body. Mr. Gray further described the process as preserving the autonomy of the teacher, because they developed their own course syllabus drawn from the articulation agreements decided by the group. The course syllabus was their attempt to inform the students and parents what was going to be taught in a particular class, how the class was going to be graded, what behaviors are to occur, major projects or activities to be included, and evaluation practices.

In addition to the grade and content groups and the cross-grade and cross-content

groups, the members of the instructional improvement committee from Granville participated in a cross-district group meeting monthly to provide teachers and administrators an opportunity to network with educators from two other school districts. The stated purpose was to reduce teacher isolation, to introduce teachers to research based information about learning and teaching practices, and to get teachers to dialogue about the information and implementation possibilities. The network was put together by Mr. Gray, two superintendents from other districts, and a retired administrator who had moved to the area and approached the three superintendents about forming school clusters. At each grade level one teacher was identified who had the respect of others, was comfortable in the presentation setting, was open to ideas, had good rapport with the staff and would disseminate ideas to their colleagues. Teacher release time was given to participate in network meetings; however, no release time is provided by the district upon return for participants to disseminate information to other teachers.

After one year of the teachers and administrators participating in the cross-district network group, Mr. Gray listed the following as merits of the network experience: the conversations were extremely beneficial, the dialogue was evolving where openness to ideas and expression occurs without fear of offending others, change in classroom instruction was being described by the teachers and observed by the principals, and improvement in student performance. He described the growth of the group contrasting the changes over time--the first meeting last year was described as a closed process where teachers seemed suspicious of the intent and the first meeting this year was one where teachers spoke openly, expressing ideas without fear of offending others. In describing the role of network members, Mr. Gray believed that administrators are there because

they have philosophical directions they want to realize and teachers are there because administrators provided them the opportunity to participate.

In addition to the district grade and cross-grade groups where teachers define the essential curriculum components, district administrators work in a group every two weeks for two hours. A schedule of meeting dates was given to each administrator in the district at the beginning of the year. To avoid problems in translation of the work, Mr. Gray expressed, "especially when it is a change, administrators need it to be articulated well and there needs to be a written process that guides the steps" (9-28-99). A major portion of the agenda for the scheduled bimonthly administrator meeting was devoted to the articulation of a written process to guide the curriculum work in the district. Time needed for technical-type work, i.e., accreditation report, class-size audit report, gifted and special education child count, is gained through additional meetings scheduled for that purpose. The regularly scheduled meetings were described by Mr. Gray as "an open process . . . needed for us to dialogue together" (9-28-99) concerning curriculum issues in the district.

Mr. Gray described situations where *new learning* occurred on the part of teachers and administrators and helped define curriculum issues in the district. He reported that during the dialogue generated through the cross-grade and content articulation agreements, teachers began to realize and verbalize that the curriculum was being pushed down for teachers in lower grades to teach more and more of the essential skills. He stated that teachers began to say "we need to ease it back up and take the responsibility of some of these things--some of the essential skills" (9-28-99). He believed this to be a turning point in the process and one which opened up possibilities for further self-

examination on the part of individual group members.

When asked how he learned what the work in the area of curriculum entailed, Mr. Gray responded, "I learned a great deal actually working with people who had years of experience. . . . I really got it through work in the field" (9-28-99). He went on to describe previous experience in another district where he felt that the curriculum process became an ineffective means by attempting to prescribe detailed activities to be carried out in each classroom. He reasoned, "You take away the individual character of the teacher and how they can best present . . . when you say this is *the* activity, you are going too far, and we did, we went too far" (9-28-99). Mr. Gray cited this experience as one in which he did not want to repeat in this district. *New learning* on his part influenced his definition and operationalization of work.

Mr. Gray expressed that he believed that teachers and administrators determine the work to be accomplished in the district, within the "limits of what is given to us from the legislators and State Department of Education" (9-28-99). The use of various district curriculum work groups and the cross-district instructional improvement network to provide teachers and principals opportunities to discuss curriculum issues and gain the perspectives of others provided opportunities for *new learning,* which according to Mr. Gray has influenced the definition and operationalization of the district's curriculum work.

According to Heifetz (1994), how work is defined and operationalized are interrelated and a description of one tells a great deal about the other. The descriptions reported thus far for the components of work *easily defined* or *elusive, defined by one* or *group,* and *defined and operationalized using known answers* or *new learning*, can be

applied to the fourth work component, *operationalized to "fix" the problem* or *resolve issues through problem definition, implementation, and evaluation entwinement.* To further articulate how Mr. Gray operationalized the curriculum work in the district, additional descriptions of this component were reported.

The empirical information documented numerous references indicating that Mr. Gray believed in the concept of group to define, implement, and evaluation the curriculum work in the district. As superintendent, he described himself as very much involved with others, teachers and principals, to accomplish the curriculum work in the district. He described the curriculum work in the district as a process, with work being carried out by groups of individuals. All teachers in the district were involved in work groups. Some groups were self-selected and others were assigned by administrators. Mr. Gray worked with the site principals to gain their input before forming groups. Once work was discussed and articulated in the administrator group, principals were given a great deal of autonomy to assign individuals to groups. According to Mr. Gray, "the only guidelines I gave them were that members need to be someone who was well respected, which did not mean tenure" (9-28-99).

Group assignments in the district included grade groups, cross-grade groups, content groups, and cross-school groups and cross-district groups. Release time was given for teachers to participate in the cross-district grade and content networks; however, release time was not provided for teachers to network with district teachers when they returned from their monthly network meetings. Networking at the district was accomplished during planning time and scheduled professional development days.

Group endeavors by district administrators included bimonthly meetings

involving site principals, director of grant programs, special education co-op director, technology coordinator, and child nutrition director and a cross-district instruction improvement network group, involving two superintendents from other districts and a retired administrator from a large metropolitan district who was interested in school clusters. Mr. Gray described his desire for administrator meetings to be an open process to determine how the work is going to be accomplished. He acknowledged difficulties that the principals had when non-certified people joined the district bimonthly meetings. For a period of time Mr. Gray asked the non-certified individuals not to attend until he could get the principals comfortable talking with each other and him. He stated,

> I don't want all of us to be simply administrators. I like to have somebody that doesn't sit in that chair all the time . . . to say 'wait a minute, you guys are forgetting this.' Because we can get channeled in one direction. So, I like having them in the meetings to gain another perspective" (Gray, 9-28-99).

At the beginning of the second year the non-certified people were again included, with better communication being reported by Mr. Gray.

In summarizing how he attempted to operationalize the curriculum work in the district, Mr. Gray remarked, "We spent a lot of time, hours trying to figure how to improve site instruction within their areas and how to go about that process and redefined it in the process . . . break things down and take a look at them" (9-28-99) in order to know what to do and how to do it. Along with other descriptors from the data, Heifetz's (1994) adaptive work component of *operationalize to resolve issues through problem definition, implementation and evaluation entwinement* was illustrated.

Descriptors of work components five, *work timed to quickly reduce distress* or

maintain a productive level of distress over an extended period of time, were found as Mr. Gray's described issues that arose causing distress to the group's equilibrium, how those issues were resolved, and the process has evolved over a period of two years.

Mr. Gray noted two instances when disturbance to the equilibrium was extremely high. One occurred when he discovered that high school students were leaving school after fifth period. He described an "age old practice" (9-28-99) of allowing students to leave after fifth period, . . . they were just emptying the building and they had become use to that, it was one of those things they had been doing for years" (9-28-99). According to the superintendent, "It took most of a year and a new principal to get it done, but we did it" (9-28-99), students attend school for the full day. The level of distress extended over a period of time and in Mr. Gray's estimation the efforts during that time were productive and resulted in students remaining in the educational setting and teachers teaching a full day with planning times scheduled throughout the day.

Issues arose in another instance, when teachers began to work in cross-grade groups. He described the disturbance to the group's equilibrium when teachers had to "sit down with the following grade level [teachers], who were use to being able to say, 'this is their job' to teach" (Gray, 9-28-99) a particular skill and discovered, "They (teachers in the lower grade level) think we are going to teach this skill!" (9-28-99). Describing the experience as an "eye-opener for them" (9-28-99), Mr. Gray expressed that the process was "good, because of the compromise that had to result there" (9-28-99), among the teachers who were ultimately responsible for teaching students. Again, productivity was gained over an extended period of time in which individual teachers were under distress to articulate and defend their thinking or amend their thinking using information gained

from the group process. The empirical information supported that the work was *timed to maintain a productive level of distress over an extended period of time*, meeting component five of adaptive work (Heifetz, 1994).

Summary

Mr. Gray, superintendent in Granville Public School, was interviewed to examine how he defined, operationalized, and assigned curriculum work in the district. The components of technical and adaptive work (Heifetz, 1994) were the foci of the interview. The predominate work components that emerged from the empirical information include: *definition elusive*; *defined by group*; *defined and operationalized using of new learning*; *resolve issues through problem definition, implementation and evaluation becoming intertwined*; and *timed to maintain a productive level of distress*. Interview information provided ample indicators that work group members in the Granville district are assigned to identify and define issues regarding curriculum and arrive at possible solutions. Furthermore, working in groups, teachers were responsible for coming to a consensus on essential skills required at each grade or content area and developing a course and content syllabus outlining for students and parents what will be learned, activities involved, student behaviors required, and evaluation practices. The component of *new learning* was demonstrated through the opportunities afforded teachers to network with educators in their own district as well as in other districts and through the practices that the superintendent abandoned as he left his old district and moved to Granville. The superintendent was not a "fixer" of problems and with the exception of parents, his involvement of others, teachers, principals, and other staff, was high and the duration of time was sufficient to meet the criteria set forth in the components of adaptive work.

Timing of solutions was such that a *productive range of distress is maintained over an extended period of time*. The empirical information supports that the components of adaptive work can be found in varying degrees in the descriptions of how the superintendent defines, operationalizes, and assigns curriculum work in the district and that in curriculum work the components of adaptive work were found to a greater degree than technical work components.

Sutterville Superintendent Interview

Five ethnic groups were represented at Sutterville. Sixty-three percent of the school population were white, 32 percent American Indian, 3 percent Hispanic, less than 2 percent African American and less than 1 percent Asian.

The district is composed of three school sites housing pre-kindergarten through twelfth grade with the following enrollment and grade assignment: Elementary with 647 students in grades PK-5; Middle School with 361 students in grades 6-8; and High School with 515 students in grades 9-12. The district's administrative building was located on the high school campus in a building housing the cafeteria. The middle school is located across the highway and the elementary school is less than one mile from the district office. The district has 111 professional staff assigned accordingly: Elementary - 40, Middle School - 30, High School - 38, and District Office - three.

Empirical data from the initial and follow-up interviews with Mr. Stone are reported in three parts: (1) interview setting, (2) superintendent's demographics, and (3) curriculum work defined, operationalized, and assigned.

Interview Setting. The Sutterville superintendent, Mr. Stone, was interviewed in his office in the district's administration/cafeteria building. Upon entering the

community, the administration offices were easily located as they are close to the heavily traveled highway going through town and were well marked. Mr. Stone had requested an early morning interview.

Visitors to the district's office enter the building through a front entrance facing the parking lot where high school students were engaged in various activities, i.e., basketball, kick ball, conversation, and listening to music. The front entrance opened to a lobby with the district administrative office to the left and the cafeteria to the right. The front door to the office opened into a semi-open corridor with several small offices along each side. The district office housed the superintendent, two administrative assistants, and four clerical staff. The superintendent's office was the last office, with a large board of education room located at the end of the corridor.

The interview took place in the superintendent's office with him sitting behind his desk, which had the appearance of several projects being worked on at the same time. I sat in one to the two chairs in front of the desk, facing him. The superintendent's office was small and somewhat crowded with the desk placed with one side against the wall. A small bookshelf along one wall was cluttered with books, mementoes, and pictures of family members, including a grandson. Wall decorations consisted of plaques citing personal accomplishments and sports related pictures.

The interview setting was comfortable and accommodating. While I was setting up for the interview, the superintendent busied himself arranging for coffee, requesting information from his secretary over the intercom, and taking a phone call. Office personnel kept popping in to exchange morning greetings and after a short time we settled in and focused on the inquiries about the curriculum work in the district. Mr. Stone did

take two phone calls during the interview time, one personal and one which related to a state-wide superintendents' group he was chairing to look at issues in H.B. 1759 dealing with curriculum.

Superintendent's Demographics

Mr. Stone has an Educational Specialist degree with certification in educational administration and math gained from a combination of two universities in a two-state area. Work experience in education included: three years as teacher of mathematics; five years as high school principal; and twenty-one years as superintendent. His educational work experience of twenty-nine years has been accumulated in the same district in which he is currently superintendent. Mr. Stone reported no work experience other than education.

Curriculum Work Defined, Operationalized, and Assigned.

Information was sought from Mr. Stone to examine how he defined, operationalized, and assigned the "work" of the district in the area of curriculum. Following a brief period of gathering demographic information about the school district, the superintendent was asked to talk with me about the curriculum work in the district.

The interview information was sorted to determine Mr. Stone's views on how curriculum work in the district was defined, operationalized, and assigned using the components of technical and adaptive work (Heifetz, 1994): (1) *easily defined* or *elusive*; (2) *defined by one* or *group*; (3) *defined and operationalized using known answers* or *new learning*; (4) *operationalized to "fix" the problem* or *to resolve issues through problem definition, implementation, and evaluation entwinement*; and (5) *timed to quickly reduce distress* or *maintain a productive level of distress over an extended period of time.*

The empirical information predominantly indicated that Mr. Stone delegated the definition and operationalization of the curriculum work in the district to the curriculum coordinator. He reported that the curriculum coordinator, who served as administrative assistant in the district office, was appointed to examine what was being done in the district and what "he thought we needed to do" (10-5-99). Repeating the emphasis on oneness, Mr. Stone stated, "We wanted someone to coordinate that effort elementary through high school--so the curriculum coordinator has done that" (10-5-99).

Definition of work in the district was the primary responsibility of the curriculum coordinator and Mr. Stone expressed that legislative mandates left local educators helpless in defining what should be taught. He stated that "the biggest problem--we are getting people outside of the education community making big decisions on what curriculum is required" (10-5-99). He referred often to curriculum alignment and stated that the curriculum was reviewed annually in the district; however, specifics of how that process was currently being defined were lacking. Mr. Stone's definition of curriculum work in the district consisted of descriptions more in line with operationalizing the work: hire a person to examine what was being done and to determine what "he thought we needed to do" (10-5-99).

Decisions on how to define the curriculum work in the district was tied to state mandates in the area of courses required, state testing, and teacher certification. For example, a course in geography and world history became requirements for graduation because it was an area tested on the state mandated tests. Changes in where geography was taught in the sequence of courses taken by high school students were implemented because of the state testing. The empirical information indicated that Mr. Stone viewed

the definition of "work" in curriculum as concrete and *easily defined*, a component of technical work (Heifetz, 1994).

Regarding curriculum work in the district being *defined by one* or group, component two of technical and adaptive work, the empirical information revealed that Mr. Stone thought teachers and principals viewed their involvement in the curriculum work as "pretty extensively. What we like to do is have departmental meetings and review what they are doing . . . so we make sure that everyone knows what their role is" (10-5-99). Meetings are "called and run by the department chairs for the most part" (10-5-99). The number of meetings was determined by the chairperson, with the administration encouraging at least two a semester. Curriculum chairpersons were selected by the staff in that department. Compensation was not paid, but the district paid registration and expenses to conferences in their area if individuals apply to attend.

Mr. Stone reported that occasionally, the curriculum coordinator calls a meeting with a department and sets the agenda. An example included the curriculum coordinator meeting with the social studies teachers in middle school and high school to "talk about geography, about the scores being pretty low and that we teach geography in the ninth grade and we test them in the eleventh" (10-5-99). In describing teacher involvement, Mr. Stone reported that teachers "looked at that and said, 'I'm sure that is a good idea. If we are going to put that much emphasis on geography and test it, then maybe we need to look at where we are teaching it.' So, that is what we did " (10-5-99). The description of teacher involvement lacked indicators that teachers considered options other than teaching geography as a separate course, moving it to a grade closer to the one where the state required testing, and requiring it to meet graduation requirements.

The superintendent involved other administrators in the curriculum work of the district. Mr. Stone reported that principals and other administrators meet every other week after school for approximately one and one half hours. The principals, administrative assistants and athletic director attended the meeting weekly and others, such as counselors, were involved on an as needed basis. An example of others being brought to the meeting included deciding the implications of H.B.1759 for ninth grade students, electives and vocational programs. Indicators of principals' involvement were: participation in weekly meetings; reporting incidents of discipline, up-coming activities or events, and enrollment numbers; and gaining information concerning decisions the superintendent made.

Mr. Stone reported involvement of others in the curriculum work of the district to be extensive; however, descriptors indicated that others were involved to provide information to the curriculum coordinator and superintendent and to disseminate information and gain recommendations on how to "fix" the problems caused primarily by mandates in the curriculum related areas, those being course requirements, student testing, and teacher certification. The interview information indicated that curriculum work was primarily defined by the superintendent and the curriculum coordinator, meeting the component of technical work.

Component three, *using readily know answers or new learning,* revealed indicators toward using known answers. Mr. Stone tied what was happening in the district's curriculum development to events of the past. He reported, "The first time we started the curriculum thing with elementary, in the early eighties, in fact I still have some of the old booklets we developed, we hired a lady and kind of put her in charge of

developing a curriculum district-wide" (10-5-99). Through the dialogue of early curriculum work in the district, a description of how Mr. Stone viewed curriculum alignment emerged. He described a process where teachers, working in grade or content groups, in kindergarten through high school decided what students needed to learn. Following the initial grade or content group meeting, teachers met within cross-grade and cross-content groups and "came to a compromise" concerning what should be taught and when. Mr. Stone described the process as "taking a while, but once it is written down and everyone understands what they are suppose to do and if you can do more that is great--but we think we came up with realistically what should be done" (10-5-99). According to the superintendent, the process of curriculum review occurred annually and "the details of when and how are left to the curriculum coordinator and department chairs" (10-5-99). These historical glimpses provided information showing a long practice of hiring someone other than the superintendent and putting them "in charge" of developing the curriculum for the district.

Information gained following a phone call Mr. Stone took during the interview provided additional indicators of his perspective of *defining work using known answers or new learning*. The call was from a member of the state administrators group working "to identify some issues out there that are non-money issues and appears they could be management type problems for school districts" (10-5-99). Mr. Stone served as the chairperson of the state group and talked about some of the issues surrounding H.B. 1759 "having a lot of issues in it dealing with curriculum" (10-5-99) and that the committee was looking "at some of those issues that might cause problems" (10-5-99).

The issues included requirements to increase the certification requirement of

middle school math teachers and satisfy the ACT core curriculum courses for high school. The management issues that the administrators' group was concerned about centered around a perceived "shortage of math teachers and when we add three more grades that is really going to create a shortage" (10-5-99); a perceived discrepancy in requiring math certification for teachers teaching sixth grade in an accreditated middle school, but not those teaching sixth grade in an accreditated elementary school; perceived inequities in the two-tiered diploma and scholarship incentive program; and open transfers, which "no one was against, but there are some issues that revolve around athletic eligibility" (10-5-99). Mr. Stone reported that when working with legislators, "they understand the problems in the new mandate, but they want us to tell them, 'How do we fix it?'"

(10-5-99). The group's role as described by Mr. Stone was "to not only identify the problem, but offer a solution or rationale on how to fix it" (10-5-99). He referred to the recent mandates of H.B.1759 as creating situations where teachers will "develop an Algebra I course that will be watered down . . . we will get those kids through and it will show on their transcripts, but I wouldn't want to bet you that they will be successful in higher math" (10-5-99). Mr. Stone also made reference to adding geography to the curriculum as a "requirement to graduate from Sutterville High School" because it was a content area mandated to be tested. Opportunity for *new learning* to occur due to the challenges presented by mandates gave way to *known technical answers* which have been perceived as working in the past. Using *known technical answers* is a component of technical work.

According to Heifetz (1994), how work is operationalized in the district is

determined by how the work is defined. Therefore, most of what has been reported thus far in the components of work *easily defined* or *elusive*; *defined by one* or *group*; and problem *defined and operationalized using known answers* or *new learning*, also applied to the fourth components: *work operationalized to "fix" the problem* or *resolve issues through problem definition, implementation, and evaluation entwinement*. Summarily, those descriptors indicated that the superintendent's definition of curriculum work was gained through delegation and mandates. He defined the work using readily known answers that, according to him, have worked in the past.

The descriptors gained from Mr. Stone indicated that he operationalizes work in the district by putting individuals in charge or taking charge himself and *using known answers to "fix" the problems* as they arise. The empirical information revealed few indicators that a great deal of dialogue on how to accomplish the curriculum work in the district occurs. Mr. Stone's definition of curriculum work relied on delegation of work and following mandates. Teachers and principals were grouped to inform them of curriculum related issues, to provide them with information on what needs to be done, and to rally their support for doing the work as outlined by the curriculum coordinator or superintendent.

The interview information indicated that work was first operationalized by grouping principals and administrative assistants, one of whom is the curriculum coordinator, weekly to keep the superintendent informed of what was happening in each site, to inform them of mandates and what was needed to meet requirements of the mandate, and to outline steps they should take with their teachers to carry out the mandates. Secondly, teachers were grouped by the department chair people, curriculum

coordinator, or superintendent to inform them of the need, to outline the steps that should be taken to accomplish the work, and to gain their support to carry out the tasks as requested. The superintendent's description of a change in testing procedures for elementary students illuminated technical work component four, *operationalized to "fix" the problem*, and provided indicators of technical work component five, *timed to quickly reduce distress*.

Discussion of test scores being used as an indicator of student mastery provided information describing the superintendent's response to distress within the district. Mr. Stone learned that some teachers in first and second grade were feeling threatened by the high test scores in kindergarten. He became concerned that some teachers thought that kindergarten teachers were being deceptive in their testing practices, and that they were implying the correct answers in some way as they provided test information. Most of the testing in early childhood was oral. In further describing his response to the problem, he stated, "So I thought, for creditability purposes, the best thing we can do is test elementary like we test our high school" (10-5-99). In the weekly administrators' meeting he told the principal, "We are going to change the way we test elementary kids this year. . . . We're going to test alphabetically . . . and assign a teacher and put them over here and test them" (10-5-99). He described the principal's response as "cause[ing] a mess over there" (10-5-99). According to Mr. Stone, he went to the elementary and called a meeting with the staff and told the teachers "what I was thinking about doing. . . . I don't want you to take it personally. I have enough confidence in you, but I think we gain credibility because there are some who think we are helping kids and I don't think we are" (10-5-99). He described the teachers as "getting on that bandwagon and so that is

what we did" (10-5-99). The distress was reduced with the "fix" because, according to the superintendent, "our scores stayed the same, they performed high" (10-5-99). As seen in Heifetz's (1994) technical work component five, the superintendent reacted quickly to "fix" the problem in order to *quickly reduce the level of distress* among teachers in the elementary. The superintendent viewed the problem as easily defined, defined the problem himself, applied a known answer of using testing practices like those at the high school, grouped the teachers to tell them how to "fix" the problem and moved quickly to reduce the distress caused by the old testing practices. These are components of technical work (Heifetz, 1994).

Summary

The superintendent of Sutterville Public School was interviewed to examine how he defined, operationalized, and assigned curriculum work in the district. The components of technical and adaptive work (Heifetz, 1994) were the foci of the interview. The components that emerged from the empirical information included work *definition easily defined, defined by one, defined and operationalized using known answers*; *operationalized to "fix" the problem*; and *timed to quickly reduce the level of distress*. All are components of technical work. Empirical information from the superintendent's interview provided ample indicators that the superintendent delegated leadership in the district in the area of curriculum to the curriculum coordinator while he maintained that role outside of the district.

Curriculum work groups were assigned for the purpose of gaining information and disseminating "fixes" to issues that arise, primarily through state mandates in the area of course requirements, testing, and teacher certification. Empirical information revealed

that while new learning helped shape curriculum development in previous years, the current practices of curriculum development rely on readily *known answers,* which is a component of technical work, to a greater degree than the use of *new learning,* which is a component of adaptive work. As indicated from components that represent curriculum work in the district being defined as technical, the preferred ways to operationalize work is also technical: group individuals to inform them of the problem and how to "fix" it, and work *timed to quickly reduce the level of distress* among members of the group. The empirical information supports that the components of technical work can be found to a high degree in the descriptions of how the superintendent defines, operationalizes, and assigns curriculum work in the district. The references to adaptive components to define, operationalize, and assign curriculum work in the district were inconsequential.

Witteville Superintendent Interview

Witteville Public School, the focus of the third case study, serves a rural community and has a school population of approximately 1003 students. Five ethnic groups were represented at Witteville. Thirty-five percent of the population were white, 55 percent American Indian, 9 percent Hispanic, and less than 1 percent African and Asian.

The district is composed of two school sites housing pre-kindergarten through twelfth grade with the following enrollment and grade assignment: Elementary with 620 students in grades PK-8 and high school with 326 students in grades 9-12. The district's administrative building was located in an older remodeled elementary building which currently houses prekindergarten and an auditorium along with the district offices. The elementary school and high school are located on the same campus across town from the

district office building. The district has 81 professional staff assigned accordingly: Elementary - 42, High School - 36, and District Office - three.

Empirical information from the initial and follow-up interviews with Mr. White are reported in three parts: (1) interview setting, (2) superintendent's demographics, and (3) curriculum work defined, operationalized, and assigned.

Interview Setting. The Witteville superintendent, Mr. White, was interviewed in the district's administration building, located about one block off the main highway and in the older part of town. The superintendent had requested an early morning interview.

Visitors to the district office enter the building through a spacious front entrance facing the street. Large trees separate the building from the quiet street. The administration building had been extensively remodeled by a former superintendent. The front entrance of the building opened into a lobby with the district administrative office to the right The door to the office opened into a suite of offices for clerical staff. The superintendent's office was spacious and furnished with a large desk, ample seating for visitors, and shelves for books and personal decorations. The district office houses the superintendent, a federal programs director, and four clerical staff.

The interview was conducted in the board of education room located adjacent to the superintendent's office. The large room was furnished with a large table and twelve swivel chairs. The table had the presence of a copious amount of work--it was later learned that the school treasurer was preparing for the annual audit. Pictures of board of education members for the past years were framed and decorated one wall, along with aerial pictures of the school campuses. The superintendent and I sat at one end of the table for the interview.

The interview setting was comfortable and accommodating. While I was setting up for the interview, Mr. White busied himself arranging for coffee and answered the telephone. It was very early and the office personnel had not arrived. The superintendent settled in quickly and focused on my inquiries about the curriculum work in the district. About thirty minutes into the interview the superintendent briefly left the interview setting to tell his secretary where he was working.

Superintendent's Demographics

Mr. White has a Masters of Education degree in administration from a state university and holds certification for superintendent, elementary principal, elementary education and language arts. Work experience in education included: three years as elementary teacher; six years as elementary principal; and ten years as superintendent. His educational work experience of nineteen years has been accumulated in four school districts. He has been superintendent three years in his current position. Mr. White reported seven years of work experience outside of education: sales, sales manager, and vice-president of sales for a fund raising company.

Curriculum Work Defined, Operationalized, and Assigned

Following a brief period of gathering demographic information about the school district, Mr. White was asked to talk to me about the curriculum work in the district. The empirical information gathered from Mr. White described how he defined, operationalized, and assigned the "work" of the district in the area of curriculum. Those descriptors were sorted into the components of technical and adaptive work, which describes "work" as: (1) *easily defined* or *elusive*; (2) *defined by one* or *group*; (3) *defined and operationalized using known answers* or *new learning*; (4) *operationalized to*

"fix" the problem or *resolve issues through problem definition, implementation, and evaluation entwinement*; and (5) *timed to quickly reduce distress* or *maintain a productive level of distress over an extended period of time.*

Regarding curriculum work being viewed as *easily defined or elusive*, empirical information revealed numerous citations where Mr. White referred to the curriculum work in the district as "a process" and described his efforts to get teachers "to look at it as a process instead of just a project" (10-15-99).

Mr. White's emphasis on "the process" indicated that he *easily defines* the curriculum work in the district as getting teachers to follow a process, a set of procedures. He viewed the "work" as outlining a process to: train the curriculum coordinator and facilitators; provide time for teachers to work in groups; state a set of goals or tasks to be accomplished; articulate curriculum content in form of objectives to be taught; and report results in a curriculum guide.

The empirical information was absent of indicators that Mr. White found the work itself to be elusive. Information indicated that he had developed and practiced this process as superintendent in a previous district and was duplicating it at Witteville, using the same procedures and resource people to train the faculty and staff. Interview information indicated that Mr. White viewed the curriculum "work" as *easily defined*, which is a component of technical work (Heifetz, 1994).

Regarding curriculum work in the district being *defined by one or group*, components two of technical and adaptive work, the empirical data revealed that Mr. White primarily defined the work to be accomplished. Interview data indicated numerous references to "I" when Mr. White described how the work in the district is defined.

Mr. White reported two instances that prompted him to determine the need for curriculum work in the district. One was the hiring of several teachers at the high school and discovering that two teachers assigned in the same content area were not teaching the same content. This prompted him toward "casually going about talking to staff trying to identify some areas that we could work on" (10-15-99). Mr. White determined that "one of the things that kept jumping out at me" (10-15-99) was that he needed to "be able to hand them [new teachers] a curriculum guide and say, 'this is what our committee has developed that we think is critical for these students to know" (10-15-99).

According to Mr. White, at the beginning of his second year he determined that curriculum review "was going to be one of our goals for this year" (10-15-99). He articulated that he had an ". . . idea of how to do the process, . . . a visualization. I could see where I though we could go because I had that experience" (10-15-99) in a previous district. At the beginning of his second year, Mr. White arranged for the curriculum coordinator to meet with the coordinator from his previous district and "they worked together very closely and were able to pull together a curriculum review that would work--customize it to us" (10-15-99). The involvement of the curriculum coordinator was that of carrying out the requests of the superintendent, including "put[ing] her together" (10-15-99) with his former district's curriculum coordinator to learn the process he wanted implemented. No other indicators were given that other models of curriculum review were considered or that others were asked what they thought should be done.

Descriptions of weekly administrator meetings indicated they were used to inform the principals and others of the curriculum work to be done, how it would be done, and how it was progressing. Interview data revealed that the superintendent gathered

information from individuals by "just casually going about talking to staff" (10-15-99) and from information gleaned he defined the curriculum work without clarification from teachers and others that his definition was theirs. Empirical information indicated that primarily the superintendent defined the curriculum work in the district using information he needed to arrive at that definition. The work being *defined by one*, the superintendent, met the criteria of technical work component two (Heifetz, 1994).

Component three, *using readily known answers or new learning*, revealed indicators toward using known answers. While there was time in the previous district that Mr. White may have used new learning to develop the curriculum review process, interview data revealed that the superintendent used *readily known answers* to define and implement the process in the Witteville District. Those included getting others to implement what he had defined, using resource people for the previous district to train personnel in the process, and grouping teachers to develop the curriculum guides. According to Mr. White, "one of the things that I tried not to repeat here," (10-15-99) was to establish so many objectives that teachers got "bogged down in trying to get through all the objectives. . . . We got too specific . . . and we weren't able to really do things effectively" (10-15-99). This information served as an indicator of new learning on the part of Mr. White. With this one exception, the balance of the empirical information indicated that the superintendent relied on *readily known answers* he gained from previous experiences to define and operationalize the "work" in curriculum, a component of technical work (Heifetz, 1994).

According to Heifetz (1994), how work is operationalized in the district is determined by how the work is defined. Therefore, what has been reported thus far in the

components of work *easily defined*; *defined by one*, and *defined and operationalized using known answers*, also apply to the fourth components of technical and adaptive work: *operationalized to "fix" the problem* or *to resolve issues through problem definition, implementation, and evaluation entwinement*. Summarily, those descriptors revealed that the superintendent defined the curriculum work in the district from his perception of what others need and based on readily known answers from his work in a previous district. The *new learning* which occurred concerning the restrictiveness of specifying too many objectives in a content area was carried forth to the new district. However, the *new learning* in itself was nonconsequential in defining or operationalizing the work in the district.

Interview information revealed that Mr. White operationalized the work in the district by engaging others in training and various work groups. Time for teachers to work on the curriculum review was gained by the superintendent applying through the State Department of Education to deregulate the amount of time students spend in school and to use that time for professional development, including curriculum review. One half day a month was requested and approved. A calendar was provided to parents informing them of the day each month that students would go home after lunch.

The empirical information indicated that to operationalize the curriculum work, the superintendent provided training for the curriculum coordinator, who in turn worked with the person who trained her and together they trained teachers to become facilitators and lead work groups. Teachers in the district were grouped in grade and cross-grade groups at the elementary school and content and cross-grade content groups at the high school. These groups met monthly to accomplish the work outlined by the curriculum

coordinator. Principals were involved in the curriculum review process through weekly meetings called by the superintendent. The meetings last about two hours and, among other things, the curriculum coordinator discussed the progress of the curriculum work groups and the professional development training.

According to Mr. White, the facilitators were responsible for reporting the work of the group to the curriculum coordinator and "for communication back and forth from her to their particular curriculum committee" (10-15-99). Prior to the monthly work group meetings, the curriculum coordinator "communicates what the mission is for that meeting or what she hopes they are going to accomplish to the facilitator. . . . She will have gotten an agenda to them on 'this time, I want you to accomplish this'" (10-15-99). The facilitators "go back and facilitates that meeting with that goal in mind and then report back to her" (10-15-99).

Evaluation of work being accomplished was measured by the groups being able to articulate the work into a "completed type of a project" (10-15-99). Mr. White reported that "some of them completed the guide and some of them got some done. So I think the telling now will be: Can we continue that this year?" (10-15-99). Responding to how the work impacted teacher practices or student learning, the superintendent stated,

> Well, right now, we are keying that a lot on the normed referenced and criterion referenced testing. But, ultimately what I think is going to come out of it is what evolved out of the one at _____ School and that is that each course developed an end of course test so they could pre and post test students to find out what they know at the beginning and what they know after they went through the process. (10-15-99)

Therefore, the interview information indicated that the impact of the curriculum work being accomplished in the district would be evaluated through the number of curriculum guides being started and completed and student performance on tests.

Components four of technical and adaptive work addresses operationalizing work by grouping individuals to (1) provide them with information they need to fix the problem, or (2) engaging them in work definition, implementation, and evaluation until these elements become intertwined. Empirical information indicated that Mr. White engaged individuals to implement a process defined by him and adopted by others to *"fix" the problems* caused by not having a written set of objectives to guide teachers in teaching content--meeting the criteria of technical work for component four.

Components five of technical and adaptive work include timing work *to quickly reduce distress* or *maintain a productive level of distress over an extended period of time.* The curriculum work was maintained during the course of the school year. Groups gained information and worked in groups monthly and are in their second year of the "work". Indicators of maintaining a productive level of distress were described by Mr. White. He reiterated that a couple of the elementary groups "got so bogged down and the facilitators began to say, 'Well, I don't know if we can really come to a consensus on this kind of thing.' It seemed like they spent more time talking around the issue as opposed to really getting to the issue--personalities got involved" (10-15-99). The superintendent reported that the curriculum coordinator talked with him about the issues but asked to work with the groups herself to "refocus on the goal and not get into the side issues" (10-15-99) and in doing so, she was able to help the group refocus and move forward. According to Mr. White, "The most difficult thing was to get people to understand that

this is not a one time deal. . . . We have shown them that we are serious in what we are trying to accomplish during this last year, and we recognized those that did move in that direction" (10-15-99). The empirical information indicated that Mr. White timed the work to allow for *a productive level of distress over an extended period of time*, a component of adaptive work (Heifetz, 1994).

Summary

The curriculum "work" in the Witteville School District was defined by the superintendent using information he gleaned from interacting with individuals in the district. However, empirical information revealed that the definition was formed with the absence of meaningful dialogue to determine if his perceptions of what teachers were saying actually articulated their definition of the "work" they perceived needed to be done. Using his previous work experience, the superintendent *easily defined* the "work" as the need to implement a process to develop curriculum guides for each grade and content area being taught. Curriculum work was operationalized by training the curriculum coordinator and teacher facilitators in a process and teachers in professional development activities; providing time through deregulation of the length of day for students one day a month; grouping teachers with facilitators, providing an agenda of tasks to be accomplished; reporting results back to the curriculum coordinator, who in turn reported to the superintendent; and in the end, producing a written curriculum guide for the content area. The curriculum work was operationalized as technical work in that the superintendent defined what the work would consist of and how the work would be operationalized, using readily known answers, and failed to ask what others thought of the process prior to and during implementation. Problem definition, implementation, and

evaluation were separate functions of the process and were carried out at different times. The superintendent responded to the distress of group members by allowing them to resolve issues that arose within the groups. His timing of work *provided a productive range of distress over an extended period of time* and meets the criteria of adaptive work in this one component of work.

Basically, the superintendent defined and operationalized the curriculum "work" and assigned members to groups using the components of technical work. The empirical information supported that a component of adaptive work was found to some degree in the descriptions of how the superintendent timed the work to produce a productive range of distress. Overall, the components of technical work were found to a greater degree than adaptive work components.

Collective Summary of Superintendents' Interview Data

Empirical information to identify how superintendents define, operationalize, and assign curriculum work in the district was gained from the interviews with three public school superintendents. Each superintendent provided demographic information about themselves. Table 1 summarizes the superintendents' demographics.

TABLE 1
Background Data of Superintendents

		Years in Education Work Experience				Total
	Highest	Current	Previous Experience		Total	Supt.
Member	Degree	Position	In District	Out District	Experience	Experience
Mr. Gray	M.S.	4	4	20	24	4
Mr. Stone	Ed.S.	21	29	0	29	21
Mr. White	M.Ed.	3	3	16	19	10

Demographic information revealed that all superintendents hold a Masters degree. Mr. Gray and Mr. White have been in their current position for four years or less and Mr. Stone has been superintendent in his current position for over 20 years. For Mr. Gray and Mr. Stone, their current positions were also their only position as superintendent, Mr. White was serving as superintendent in his second district, with a total of ten years.

The empirical information revealed that all three superintendents were involved in work related to curriculum in their district and that they ultimately determined how the work in the district was defined, operationalized, and assigned. The work in Sutterville and Witteville was primarily accomplished through the superintendent working with the curriculum coordinator to outline a process involving others in a curriculum review process. Individuals were grouped in grade and content work groups to accomplish the work as outlined. The work in the Granville School was accomplished through the superintendent working with the district administrators to group individuals for problem definition, implementation, and evaluation. Table 2 summarizes the work components by district.

Using Heifetz's components of technical and adaptive work, the following characterizations were revealed in the empirical information: the Granville superintendent primarily characterized the curriculum work as adaptive; the Sutterville superintendent characterized the curriculum work as technical; and the Witteville superintendent characterized the curriculum work as predominantly technical, with one adaptive work component present--timing work to maintain a productive level of distress.

TABLE 2
Summary of Technical and Adaptive Work Components by District

COMPONENTS OF WORK	DISTRICT		
Technical Work	Granville	Sutterville	Witteville
Easily Defined		X	X
Defined by one		X	X
Defined using known answers		X	X
Operationalized to fix the problem		X	X
Timed to quickly reduce distress		X	
Adaptive Work			
Elusive to define	X		
Defined by group	X		
Defined and operationalized using new learning	X		
Operationalized to resolve issues through problem definition, implementation, and evaluation entwinement	X		
Timed to maintain a productive level of distress over an extended period of time	X		X

Work Group Survey Data

Information gained from the work group survey was used to examine the relationships that existed among the members of a curriculum work group assigned by the superintendent of each of the three districts. The survey instrument and demographic questionnaire were given to each member. The survey instrument and demographic questionnaire sought information regarding educational and work experiences, socialization and group interaction outside of work, longevity in the same setting or community, and family. Follow-up interviews were conducted with respondents to clarify some responses and gain additional information.

Information gained from the demographic questionnaire provided background information about individual group members and allowed me to view the group as a whole. The demographic information was reported for that purpose and did not provide information concerning relationships with other work group members.

The work group survey included a list of seven descriptions of relationships: (1) teach in the same grade, (2) teach in the same subject area, (3) teach in the same building, (4) socialize with outside of school, (5) belong to same civic or religious organization, (6) grew up in the same community, and (7) related to. Participants were invited to list other relations if they thought they applied.

A list of work group members was included in the survey instrument and respondents were asked to select the description that best described their relationship to other individuals on the list by placing the corresponding number beside the member's name. Respondents were asked to list as many descriptions as applied to their relationship to the individual and to estimate the amount of time with each group member using a D for daily, W for weekly, and M for monthly. Follow-up interviews were conducted with respondents to clarify some responses listed as "other" and to gain information regarding reciprocal services. Appendix E (Tables E1, E2, and E3) provides a summary representation for each work group of all ties reported by respondents on the seven descriptions of relationships, as well as the other relationships which were listed.

Information from the work group survey and the follow-up interviews were categorized using Granovetter's (1973) concepts of amount of time, emotional intensity, intimacy, and reciprocal services. The concept of time was characterized by respondents estimating the amount of contact as daily, weekly, or monthly. All reported contacts were

categorized. Emotional intensity was characterized using survey descriptions number four (socialize with outside of school) and number seven (related to). Intimacy represents the shared knowledge that the individuals of a group have in common. Description of relationship numbers one, two, and three (teach in the same grade, subject area, and building, respectively), five (belong to same civic or religious organizations, and six (grew up in the same community) were used to characterize shared knowledge.

Information regarding reciprocal services was gained during the follow-up interviews. Respondents were asked who, within the work group, they traded favors with, i.e., trading duty, covering classes, running errands, etc. All responses were reported as a tie even though in some cases an individual would report a relationship with another member of the work group and that member did not report the same relationship. I made the determination to report the relationship because from the reporting members perspective, a reciprocal relationship does exist, it may simply be one sided. The descriptions of relationships listed on the survey provided information which coincides with Granovetter's (1973) and Baker's (1994) definition of ties which relate to the concept of time, emotional intensity, intimacy, and reciprocal services.

Granovetter's (1973) definition of the strength of a tie being a *combination* of the amount of time, emotional intensity, intimacy, and reciprocal services which characterize the tie was used to determine the strength of the ties reported by work group members. The combination of ties reported in the categories of emotional intensity, intimacy, and reciprocal services were used to determine the strength of a tie. For example, a work group member reporting two of the three concepts would constitute a strong tie, while the reporting of only one concept would constitute a weak tie. The concept of time was

necessary for the tie to exist at all (Granovetter, 1973; Baker, 1994); however, for the purpose of this study, time was not used in determining the strength of a tie.

It should be noted that all respondents from a work group had some shared knowledge resulting from working in the field of education and in the same district. However, according to Granovetter (1973), the absence of a tie signifies both the lack of an identified relationship and those without substantial significance and "that two people 'know' each other by name need not move their relation out of this category if their interaction is negligible" (p. 1361). Ties were reported as absent if the respondent did not report a tie with another work group member or if they indicated a tie but described the amount of contact as insignificant.

A summary of ties categorized by amount of time, emotional intensity, intimacy, and reciprocal services is reported in Appendix F (Tables F1, F2, and F3) for each work group member in the three districts. Absent ties are also reported in Appendix F, along with a summary of weak ties and strong ties for each of the work group members. To maintain the confidentiality of the respondents and their choices of other members, each member was randomly assigned an identifier using the letter G for Granville, S for Sutterville, and W for Witteville respondents. The identifiers will be used throughout the presentation of the data.

Granville Work Group

Nineteen members of the Instructional Improvement Committee were assigned by the Granville superintendent and participated in this study. Fifteen of the members responded to the survey and demographic questionnaire and four members did not respond. Those not responding were G10, G11, G12, and G13.

Demographic Data

Work group members were asked to identify various demographic data about themselves. The information allowed me to view the educational and work backgrounds of work group members individually and as a group. Table 3 provides a summary of responses.

TABLE 3
Demographic Data of Granville Work Group Members

		Years in Education Work Experience				Years in	Number of
	Highest	Current	Previous Experience		Total	Other Work	Certification
Member	Degree	Position	In	Out	Experience	Experience	Areas Held
G1	M.Ed.	4	0	1	5	2	6
G2	B.S.	2	1	1	4	7	3
G3	M.Ed.	5	12	2	19	5	4
G4	B.S.	1	0	9	10	3	3
G5	M.A.	1	0	16	17	0	2
G6	B.S.	5	0	0	5	9	1
G7	B.S.	2	0	1	3	3	1
G8	B.A.	1	0	16	17	3.5	4
G9	M.Ed.	34	3	0	37	0	4
G10	-	-	-	-	-	-	-
G11	-	-	-	-	-	-	-
G12	-	-	-	-	-	-	-
G13	-	-	-	-	-	-	-
G14	B.S.	20	0	0	20	0	3
G15	M.Ed.	19	0	0	19	4	1
G16	B.S.	2	0	0	2	8	2
G17	M.A.	2	0	16	18	0	1
G18	B.S.	3	0	8	11	3	2
G19	M.Ed.	10	0	12	22	0	8

Eight respondents held a bachelors degree, which is a common requirement for teacher certification. Seven respondents held a masters degree (G1, G3, G5, G9, G15, G17, and G19). Examination of reported educational work experience revealed that length of tenure in current positions ranged from less than one year to 34 years with the average number of years being approximately seven. Five respondents reported having

taught in no other district (G6, G9, G14, G15, and G16) and four reported no previous education work experience other than their current position (G6, G14, G15, and G16). The total education work experience ranged from two to 37 years, with the average total years of education work experience being approximately 14 years.

Eleven respondents (G1, G2, G3, G4, G5, G8, G9, G14, G16, G18 and G19) reported holding multiple areas of certification, with the range being from two to eight areas held.

Survey Data

Information from the work group survey was summarized for reporting. First, all ties reported by respondents on each of the seven descriptions of relationships and others they deemed important are reported in Appendix E (Tables E1) for Granville work group members. Four work group members did not respond to the survey (G10, G11, G12, and G13). However, relationships reported by other work group members for one of these individuals were included in the reported data. Second, the reported relationships were categorized by amount of time, emotional intensity, intimacy, and reciprocal services. Further categorization included absence of ties, weak ties and strong ties. A summary of this information is also reported in Appendix F (Table F1). Lastly, a summary of strong, weak, and absent ties is reported in Table 4.

A summary of strong ties, weak ties, and absent ties was compiled for the curriculum work group from Granville School. Table 4 represents a summary of data reported by work group members. The information revealed that strong ties among members ranged from zero to five, weak ties ranged from zero to fourteen, and absent ties ranged from zero to fifteen. One work group member (G9) reported no strong ties; G3

reported one strong tie; G4, G5, G6, and G7 each reported two strong ties; G14, G15, G16, G17, G18, and G19 each reported three strong ties; G1 and G8 reported four strong ties; and G2 reported the most strong ties, five.

TABLE 4
Granville School: Summary of Ties by Work Group Member

Work Group Member	Strong Ties	Weak Ties	AbsentTies
G1	4	4	10
G2	5	1	12
G3	1	8	9
G4	2	3	13
G5	2	6	10
G6	2	7	9
G7	2	4	12
G8	4	14	0
G9	0	3	15
G10	-	-	-
G11	-	-	-
G12	-	-	-
G13	-	-	-
G14	3	4	11
G15	3	1	14
G16	3	2	13
G17	3	0	15
G18	3	8	7
G19	3	0	15

Note. Work group members G10, G11, G 12, and G13 did not respond to the survey.

Two Granville work group members reported no weak ties (G17 and G19); G2 and G15 reported one weak tie; G16 reported two weak ties; G4 and G9 reported three weak ties; G1, G7 and G14 reported four weak ties; G5 reported six weak ties; G6 reported seven weak ties; G3 and G18 reported eight weak ties; and G8 reported the largest number of weak ties, with fourteen.

The absence of ties among Granville work group members was found in abundance with 13 of the 15 respondents reporting the absence of ties with one-half or more of the work group members. Absent ties among work group members revealed the

following: G8 reported no absent ties; G18 reported seven absent ties; G3, G5, and G6 reported nine absent ties; G1 reported ten absent ties; G14 reported 11 absent ties; G2 and G7 reported 12 absent ties; G4 and G16 reported 13 absent ties; G15 reported 14 absent ties; and G9, G17, and G19 reported 15 absent ties.

Summary

Fewer strong ties were reported among Granville work group members than weak ties. The absence of relationships was the most dominant characteristic revealed through the data. The absence of a tie is significant in that it becomes the weakest tie, indicating a greater difference among individuals.

Sutterville Work Group

Demographic Data

Respondents included nine members of a curriculum work group assigned by the Sutterville superintendent. Work group members were asked to identify various demographic data about themselves. The information allowed me to view the educational and work backgrounds of work group members individually and as a group. A summary of responses is reported in Table 5.

Five respondents held a bachelors degree, which is a common requirement for teacher certification. Four respondents held a masters degree (S1, S4, S8, and S9). Examination of reported educational work experience revealed that length of tenure in current positions ranged from one year to 23 years with the average number of years being approximately nine. Two respondents reported having taught in no other district (S6 and S4) and seven reported no in-district teaching experience other than their current position (S1, S2, S3, S4, S5, S6, and S7).

TABLE 5
Demographic Data of Sutterville Work Group Members

Member	Highest Degree	Years in Education Work Experience: Current Position	Previous Experience In	Previous Experience Out	Total Experience	Years in Other Work Experience	Number of Certification Areas Held
S1	M.S.	9	0	7	16	1	1
S2	B.S.	7	0	9	16	0	1
S3	B.S.	9	0	6	15	4	2
S4	M.S.	23	0	0	23	0	6
S5	B.A.	6	0	3	9	5	2
S6	B.S.	1	0	0	1	11	1
S7	B.S.	14	0	.5	14.5	10	1
S8	M.S.	5	2	7	14	1	2
S9	M.S.	7	25	1.5	33.5	0	2

The total education work experience ranged from one to 33.5 years, with the average total years of education work experience being approximately 15 years. Five respondents reported holding multiple areas of certification, with the range being from one to six areas held.

Survey Data

The information from the respondents of the work group survey was summarized for reporting. First, all ties reported by respondents on each of the seven descriptions of relationships and others they deemed important are reported for Sutterville School in Appendix E (Tables E2). Responses were received from all work group members. Second, the relationships reported by the respondents were categorized by amount of time, emotional intensity, intimacy, and reciprocal services. Further categorization included absence of ties, weak ties, and strong ties. A summary of these ties is also reported in Appendix F (Table F2). Lastly, a summary of strong, weak, and absent ties is reported in Table 6.

TABLE 6
Sutterville School: Summary of Ties by Work Group Member

Work Group Member	Strong Ties	Weak Ties	Absent Ties
S1	3	5	0
S2	3	5	0
S3	6	2	0
S4	7	1	0
S5	6	2	0
S6	4	4	0
S7	8	0	0
S8	8	0	0
S9	7	1	0

A summary of strong ties, weak ties, and absent ties was compiled for the curriculum work group from Sutterville School. Table 6 represents a summary of data reported by work group members and revealed that strong ties among the nine respondents ranged from three to eight, weak ties ranged from zero to five, and there were no reported absent ties. S1 and S2 reported three strong ties; S6 reported four strong ties; S3 and S5 reported six strong ties; S4 and S9 reported seven strong ties, and S7 and S8 both reported the largest number of strong ties, with eight each.

Two Sutterville work group members reported no weak ties (S7 and S8) S4 and S9 reported one weak tie; S3 and S5 reported two weak ties; S6 reported four weak ties; S1 and S2 reported five weak ties, which was the greatest number of weak ties reported. Data from respondents revealed that the absence of ties among work group members was zero.

Summary

The number of strong ties among the Sutterville work group was more abundant than weak ties. Two respondents (S1 and S2) reported more weak ties than strong ties, leaving seven respondents reporting as many or more strong ties than weak ones. The

lack of absent ties among work group members was significant in that all members reported some ties with all other members of the group.

Witteville Work Group

The respondents included eleven members of a curriculum work group assigned by the Witteville superintendent. One member (W3) of the group did not respond to the survey.

Demographic Data

Work group members were asked to identify various demographic data about themselves. The information allowed me to view the educational and work backgrounds of work group members individually and as a group. A summary of demographic information is reported in Table 7.

TABLE 7
Demographic Data of Witteville Work Group Members

		Years in Education Work Experience				Years in	Number of
	Highest	Current	Previous Experience		Total	Other Work	Certification
Member	Degree	Position	In	Out	Experience	Experience	Areas Held
W1	M.Ed.	7	0	15	22	6	4
W2	M.Ed.	11.5	0	3	14.5	15	1
W3	-	-	-	-	-	-	-
W4	B.S.	15	0	2	17	0	1
W5	M.Ed.	1	2	27	28	1	4
W6	B.A.	3	0	2	5	5	2
W7	M.Ed.	8	5	1	14	10	3
W8	M.Ed.	3	0	26	29	3	4
W9*	B.S.	2	4	4	10	4	0
W10*	H.S.	3	4	0	7	10	0
W11*	A.S.	2.5	0	0	2.5	0	0

*Note. Members W9, W10, and W11 are support staff who serve on the work group.

Three respondents held a bachelors degree (W4, W6, and W9), which is a common requirement for teacher certification. Five respondents held a masters degree (W1, W2, W5, W7, and W8). Examination of reported educational work experience

revealed that length of tenure in current positions ranged from one year to 15 years with the average number of years being approximately six. Two respondents (W10 and W11) reported having worked in no other district and six reported their current position as the only experience in the district. The total education work experience ranged from two and one-half to 29 years, with the average total years of education work experience being approximately 17 years. Five (W1, W5, W6. W7, and W8) of the eight certified respondents reported holding multiple areas of certification, with the range being from two to four areas held.

Survey Data

Information gained from the work group survey was summarized for reporting. First, all ties reported by respondents on each of the seven descriptions of relationships and others they deemed important are reported in Appendix E (Tables E3). Responses were received from ten work group members, with W3 not responding. Those members who listed relationships with W3 were reported. Second, the relationships reported by the respondents were categorized by amount of time, emotional intensity, intimacy, and reciprocal services. Further categorization included absence of ties, weak ties, and strong ties. A summary of these ties is also reported in Appendix F (Table F3). Lastly, a summary of strong, weak, and absent ties is reported in Table 8.

A summary of strong ties, weak ties, and absent ties was compiled for the curriculum work group from Witteville School. Table 8 represents a summary of data reported by work group members and revealed that strong ties among the eleven respondents ranged from three to eight, weak ties ranged from zero to seven, and absent ties ranged from zero to four.

TABLE 8
Witteville School: Summary for Ties by Work Group Member

Work Group Member	Strong Ties	Weak Ties	Absent Ties
W1	5	2	3
W2	7	1	2
W3	-	-	-
W4	4	2	4
W5	4	7	0
W6	3	5	2
W7	4	3	4
W8	8	2	0
W9	7	3	0
W10	7	3	1
W11	8	0	3

Respondent W6 reported three strong ties; W4, W5, and W7 reported four strong ties; W1 reported five strong ties; W2, W9, and W10 reported seven strong ties, and W8 and W11 both reported the largest number of strong ties, with eight each. One Witteville work group member reported no weak ties (W11); W2 reported one weak tie; W1, W4, and W8 reported two weak ties; W7, W9, and W10 reported three weak ties; W6 reported five weak ties; and W5 reported the largest number of weak ties, with seven.

The absence of ties among Witteville work group members was found with seven respondents reporting from one to four members with whom they have no ties. Absent ties among work group members revealed the following: W5, W8, and W9 reported no absent ties; W10 reported one absent tie; W2 and W6 reported two absent ties; W1 and W11 reported three absent ties; W4 and W7 both reported four absent ties each, which was the most reported.

Summary

The number of strong ties among the Witteville work group was greater than weak ties. No respondents reported more weak ties than strong ties, with respondents W4 and

W7 reporting four strong and four absent each. All of the respondents reported strong ties with members of the group; however, all respondents also reported weak or absent ties.

Work Group Data Summary

Information from the work group survey was used to examine the relationships that existed among the members of a curriculum work group assigned by the superintendent of each of the three districts. Thirty-nine work group members were included in the survey, with thirty-four choosing to return the survey instrument and demographic questionnaire. The fourteen respondents from Granville reported ties with all nineteen members of the work group. Fewer strong ties were reported among the group than weak ties, with the absence of ties being the most dominant characteristic revealed through the data. The absence of a tie is significant in that it becomes the weakest tie, indicating a greater difference among individuals (Granovetter, 1973).

All of the nine members of the Sutterville work group responded to the survey and reported that the strong ties among the group were more dominant than weak ties. Two respondents reported more weak ties than strong ties, leaving seven respondents reporting as many or more strong ties than weak ones. All members reported some ties with all other members of the group; therefore, the absence of ties reported was zero for each member.

The number of strong ties among the Witteville work group was greater than weak ties. No respondents reported more weak ties than strong ties, with two respondents reporting four strong and four absent each. All of the respondents reported strong ties with members of the group; however, all respondents also reported weak or absent ties.

Empirical Information Summary

The purposes of data collection were to characterize the "work" (Heifetz, 1994) in the curriculum as defined, operationalized, and assigned by the superintendent and "ties" (Granovetter, 1973) among a curriculum work group in the district. Determining the effectiveness of the work or the ties was not a part of this study. Empirical information to identify how superintendents define, operationalize, and assign curriculum work was gained from the interviews with three public school superintendents. Information to determine ties among the work groups was gained from a survey of members.

The interview information revealed that all three superintendents were involved in work related to curriculum in their district and that they ultimately determined how the work in the district was defined, operationalized, and assigned. Heifetz's components of technical and adaptive work revealed the following characterizations in the interview information: (1) Granville's superintendent primarily characterized the curriculum work as adaptive; (2) Sutterville's superintendent characterized the curriculum work as highly technical; and (3) Witteville's superintendent characterized the curriculum work as predominantly technical, with the adaptive component of timing work to maintain a productive level of distress. Table 2 provides a summary of the work components.

The work group survey information was used to examine the relationships that existed among the members of a curriculum work group assigned by the superintendent of each of the three districts. Thirty-nine work group members were included in the survey, with thirty-four choosing to return the survey instrument and demographic questionnaire. Information from Granville indicated fewer strong ties were reported among the group than weak ties, with the absence of ties being the most dominant

characteristic. Sutterville respondents reported that strong ties among the group were more dominant than weak ties. All members reported some ties with all other members of the group; therefore, the absence of ties reported was zero for each member. The number of strong ties among the Witteville work group was greater than weak ties. No respondents reported more weak ties than strong ties. All of the respondents reported strong ties with members of the group; however, all respondents also reported weak or absent ties.

CHAPTER IV

ANALYSIS OF THE DATA

The empirical information presented in Chapter III was analyzed individually and collectively through the lenses of Technical and Adaptive Work Components (Heifetz, (1994); Network Analysis (Granovetter, 1973, 1976, 1995); and Perpetuation Theory (Braddock, 1980; McPartland & Braddock, 1981; Wells & Crain, 1994). Individually, the superintendent interview information was analyzed using the components of technical and adaptive work (Heifetz, 1994) and the curriculum work group survey information was analyzed using Network Analysis (Granovetter, 1973, 1976, 1995). Collectively, the empirical data characterizing the "work" and "ties" was analyzed through the lenses of Perpetuation Theory (Braddock, 1980; McPartland & Braddock, 1981; Wells & Crain, 1994). The purpose of data analysis was to (1) characterize the curriculum work as perceived by the superintendent and the ties among a work group assigned by him and (2) to relate the "work" and "ties" to perpetuation. Judgements about the effectiveness of the superintendents' practices or the work group members' relationships were not part of the study.

For the purpose of this study, analysis of curriculum work was limited to empirical information collected from the superintendents and analysis of ties was limited to information collected from work group members. The focus placed on data collection augmented the analysis of information toward the stated purpose of this study, which was

to explore the connection between superintendents' perception of curriculum work in the district and the ties among members of a curriculum work group assigned by them and relate the findings revealed through data analysis to perpetuation and change of school culture. Empirical information was analyzed simultaneously throughout data collection using Merriam's (1988) views of qualitative design to guide the process. This permitted reflection and synthesis, which informed and redirected the analysis process until characterizations of "work" and "ties" could be made and reported.

Curriculum Work Defined, Operationalized, and Assigned

Superintendents from three public school districts were interviewed to identify patterns in how they defined, operationalized, and assigned the curriculum work. The empirical information was presented in case reports and analyzed using Heifetz's (1994) components of technical and adaptive work. Information was categorized as technical work if descriptors characterized work as: (1) *easily defined*, (2) *defined by one*, (3) *defined using known answers*, (4) *operationalized to "fix" the problem*, and (5) *timed to quickly reduce distress*. Information was categorized as adaptive work if descriptors characterized work as: (1) *elusive to define*, (2) *defined by group*, (3) *defined and operationalized using new learning*, (4) *operationalized to resolve issues through problem definition, implementation, and evaluation entwinement*, and (5) *timed to maintain a productive level of distress over an extended period of time.*

Interview information was analyzed for descriptors which represented definition of curriculum work, operationalization of work, and assignment of work within the district. Each descriptor given by the superintendent was categorized into one of these representations. Analysis of each descriptor occurred using Heifetz's (1994) components

of work to characterize the descriptor as technical or adaptive. Analysis of information from the superintendents' interview is presented first by school and then collectively.

Granville School Superintendent

Empirical information from the interview with the Granville superintendent was analyzed for descriptors which characterized his perception of the curriculum work in the district. Analyses of those characterizations were viewed through the lens of Heifetz's (1994) components of technical and adaptive work and categorized accordingly.

Components of Technical Work

Empirical information indicated that the Granville superintendent's descriptors of curriculum work as technical were found in two instances during the interview. He reported that the regularly scheduled administrator's meeting was used to discuss how the curriculum in the district could be improved and that, if needed, other meetings were scheduled to take care of the technical matters, i.e., accreditation reports, class-size audit reports, gifted and special education child count, etc. Another characterization of technical work was found in the superintendent's description of the raising of funds in order to continue and expand the cross-district curriculum improvement network providing teachers with opportunities to dialogue with teachers in other districts and experts in the field of learning.

Each reference was given in the context of describing how the regularly scheduled meetings were reserved for discussion of the curriculum related issues and how to continue and expand the involvement of teachers in the process of defining, implementing, and evaluating curriculum issues to improve learning and teaching. While both indicated technical work to be accomplished, both also reinforced the

superintendent's commitment to keeping an adaptive process concerning curriculum work in the district. Therefore, characterizations of the curriculum work in the district which could be categorized using the components of technical work were negligible.

Components of Adaptive Work

Descriptors from the superintendent's interview indicated several characterizations of adaptive work. The descriptors were vivid enough to predominately categorize them into the five components of technical work outlined by Heifetz (1994). Analysis revealed numerous descriptive passages where the superintendent related the elusive nature of curriculum definition as he described the work of teachers in cross-grade and cross-content groups. He remarked that they had not fully understood how the curriculum was being pushed down for students to learn more and more essential skills in early grades of school and they had never really thought about what other teachers were teaching or students had learned prior to coming to them.

The adaptive work component of using new learning was characterized through descriptors of work being accomplished through experiences gained mostly from cross-grade and cross-content groups and the cross-district curriculum improvement network, involving teachers in dialogue about learning and teaching. These same descriptors, along with others, were analyzed through Heifetz's (1994) adaptive work component that characterizes the process of grouping individuals. Analysis of empirical information revealed that in curriculum work, the superintendent grouped individuals to engage them in problem definition, implementation, and evaluation.

Timing of work to maintain a productive level of distress over an extended period of time, was found in Mr. Gray's descriptors of how he viewed and operationalized the

curriculum work in the district. Information revealed that group work had continued more than two years, the cross-district network group was beginning its second year, efforts were being made to expand the network to include more teachers, and students' learning time and teachers' teaching time had been expanded to include a full day of instruction. Distress was maintained as issues arose and involvement of others was increased and maintained over an extended period of time. These descriptors characterized Heifetz's (1994) component of adaptive work regarding timing of work and distress of group members.

Summary

Few descriptors emerged which could be characterized as technical work from the superintendent's interview data. Mr. Gray's resistance to perpetuate the practice of allowing high school students to leave school after fifth hour, characterized his unwillingness to follow a technically convenient practice of reducing the amount of time teachers and principals were required to teach and monitor students in the learning setting.

According to Heifetz (1994), the pinnacle of adaptive work requires the entwinement of problem definition, implementation, and evaluation to the extent that one foster the other and that the work would be timed to maintain a productive range of distress over an extended period of time. Additional data would be required to determine where the Granville School is regarding the progression toward reaching this pinnacle; however, analysis of the superintendent's interview information revealed that Mr. Gray's perception of curriculum work aligns with the components of adaptive work.

Sutterville School Superintendent

Empirical information from the Sutterville superintendent was analyzed for descriptors which characterized his perceptions of the curriculum work in the district. Analyses of those characterizations were viewed through the lens of Heifetz's (1994) components of technical and adaptive work and were categorized in accordance with those components.

Components of Technical Work

Characterizations of the curriculum work in the district which could be categorized using the components of technical work were predominant in the interview information. Decisions on how to define and operationalize the curriculum work in the district were tied to state mandates in the area of courses required, state testing, and teacher certification. Descriptions indicated that work was operationalized by grouping principals and administrative assistants, one of whom was the curriculum coordinator, weekly to keep the superintendent informed of what was happening in each site; informing them of mandates and what was needed to meet their requirements; and outlining what steps they should take with their teachers to carry out the mandates.

The superintendent reported involvement of others in the curriculum work in the district to be extensive. The descriptors of that involvement indicated that others were involved to provide information to the superintendent and for dissemination of information and to gain recommendations on how to fix the problems caused primarily by mandates in the curriculum related areas, predominately course requirements, student testing, and teacher certification. The descriptors of how work was defined and operationalized and why individuals were grouped vividly illustrated Heifetz's (1994)

components of technical work. Information which guided the current practices in curriculum work was primarily drawn from practices that have been honed and perfected to efficiently conduct curriculum review. Readily know answers were applied as issues arose and the timing of intervention occurred to reduce the level distress between teachers and others. Group work has occurred over an extended period under the leadership of the superintendent. The practices which drive the curriculum work have been learned through the superintendent's history in the district and in his understand of the legislative process which leads to mandates that impact the curriculum. These descriptors characterized Heifetz's (1994) components of technical work.

Components of Adaptive Work

Interview information from the Sutterville superintendent was absent of descriptions which fit the components of adaptive work. Analysis revealed that indicators of adaptive work were negligible.

Summary

Empirical information from the superintendent's interview provided ample indicators that the superintendent delegated leadership in the area of the curriculum to the curriculum coordinator, while he maintained that role outside of the district. Curriculum work groups were assigned for the purpose of gaining information and disseminating "fixes" to issues that arose, primarily through state mandates in the area of course requirements, testing, and teacher certification. Analysis revealed that while new learning helped shape curriculum development in previous years, the current practices of curriculum development rely on readily *known answers,* which is a component of technical work, to a greater degree than the use of *new learning,* which is a component of

adaptive work. As indicated from components that represent curriculum work in the district being defined as technical, the preferred way to operationalize work was also technical: group individuals to inform them of the problem and how to "fix" it; and work *timed to quickly reduce the level of distress* among members of the group. The empirical information supports that the components of technical work can be found to a high degree in the descriptions of how the superintendent defines, operationalizes, and assigns curriculum work in the district. The references to adaptive components to define, operationalize, and assign curriculum work in the district were inconsequential.

Witteville School Superintendent

Empirical information from the Witteville superintendent was analyzed for descriptors which characterized his perception of the curriculum work in the district. Analyses of those characterizations were viewed through the lens of Heifetz's (1994) components of technical and adaptive work and categorized accordingly.

Components of Technical Work

Characterizations of the curriculum work in the district were categorized using four of the five components of technical work. The four technical components categorized from the superintendent's interview data included work definition easily defined, by one, using known answers, and grouping individuals to operationalize a "fix" to problems.

The curriculum work in the Witteville School was defined by the superintendent, using known answers he learned while working in another district. Mr. White informally gained information from teachers and formulated ideas to resolve the issues. The lack of meaningful dialogue to determine if his perception of what teachers were saying actually

articulated their definition of what needed to be accomplished. Using previous work experience, the superintendent characterized the work to be accomplished in terms of implementing a process of curriculum review. Curriculum work was primarily operationalized by training the curriculum coordinator and teacher facilitators in the process and using group work and professional development to get teachers to accomplish the curriculum review process.

Components of Adaptive Work

Early analysis of the superintendent's interview information appeared to categorize the work as fitting the components of adaptive work. The illusion was created by the high degree of group work that was being orchestrated in the district. Closely viewing the descriptors through the lens of Heifetz's (1994) technical and adaptive work revealed that the criteria of adaptive work were being accomplished. However, it was accomplished in isolation and outlined primarily by the superintendent. Entwinement of work definition, implementation and evaluation did not occur. One component of adaptive work was met--timing of work to maintain a productive level of distress over an extended period of time.

Summary

Individuals were grouped to accomplish the work which had been defined by the superintendent using his experiences learned in a previous school district. Problem definition, implementation, and evaluation were separate functions and were carried out at different times throughout the process. The lack of entwinement of definition, implementation, and evaluation characterized the work as meeting a component of technical work. The fifth component of adaptive work, timed to provide a productive

range of distress over an extended period of time, was evident in the interview information.

Analysis of empirical information revealed that the Witteville superintendent characterized curriculum work in the district as technical through work definition, operationalization and assignment. Analysis of the superintendent's descriptions of his response to issues that produced distress among groups characterized the component of adaptive work, timing work to maintain a productive level of distress over an extend period of time. Overall, analysis of descriptors revealed that components of technical work were present to a greater degree than adaptive work. The curriculum "work" in the Witteville School

Collective Summary of Curriculum Work

According to Heifetz (1994), both technical and adaptive work are needed in order for a leader to determine what needs to be perpetuated in the organization and what needs to be changed. This portion of the study was to examine superintendents' definition, operationalization, and assignment of curriculum work in schools. Empirical information was analyzed for those indicators that most closely represented technical and adaptive work. Analysis of the superintendents' interview information revealed descriptors that the Sutterville and Witteville superintendents perceived work to be technical to a greater degree than adaptive and the Granville superintendent viewed work as adaptive to a greater degree than technical. Table 2 presents a summary of the components of technical and adaptive work by district.

Components of adaptive work were prominent in the Granville superintendent's descriptions of the curriculum work definition, implementation, and evaluation

entwinement; the process of professional collaboration through cross-grade groups, cross-content groups, and cross-district networks offered exposure to new and different ideas and practices; and the longevity and maintenance of a productive level of distress. Change in the way individuals view curriculum was sought by the superintendent. According to Heifetz (1994), these are components of adaptive work and promote change within an organization, like schools.

Technical work components were predominant in the Sutterville superintendent's descriptions of curriculum work definition, implementation, and evaluation, which were operationalized as separate tasks carried out using known and tired practices and timed to reduce the level of distress among groups within the school. Empirical information revealed that the superintendent's perceptions of curriculum work were drawn from practices which had historical roots in the district of which he had participated as a teacher, principal, and superintendent. According to Heifetz (1994), these descriptions exemplify technical work and lead to perpetuation of existing practices within an organization, like school.

Components of both technical and adaptive work were found in the Witteville superintendent's descriptions of curriculum work. He described a process which highly involved individuals in group work, which was well defined and articulated by the superintendent using know answers from his previous experience. Problem definition, implementation, and evaluation were somewhat overlapping; however, *entwinement* of these did not emerge in the data. While meaning to individuals involved in the work was not part of the study, empirical information from the superintendent's interview revealed that he placed value on the "process" while *entwinement* of the components and using

new learning on the part of individuals did not emerge as part of his perception of curriculum work. Heifetz (1994) posits that a major difference in technical and adaptive work is the involvement of individuals in discovering for themselves *new learning* rather than carrying out tasks which have meaning to another person and *entwinement* of the process of work definition, implementation, and evaluation. The first four components of technical work were found to be predominant in the data from Witteville, with the fifth component being adaptive in that the superintendent *timed the work to maintain a productive level of distress over an extended period of time.* Components of technical work were predominant to a greater degree than adaptive work, which according to Heifetz (1994) would lead to perpetuation within an organization, like school.

Ties Among Work Group Members

Curriculum work groups assigned by superintendents in three public school districts were surveyed to identify relationships or "ties" among members. The information was presented in case reports and analyzed using Granovetter's (1973, 1976, 1995) strength of ties. Reported relationships were characterized using the concepts of time, emotional intensity, intimacy, and reciprocal services. The strength of a tie was gained by viewing these concepts in the combination.

To aid in examining data, all reported relationships were listed for each of the respondents (Appendix E, Tables E1, E2, and E3). This provided a starting point for analysis of the relationships. The information collected from the work group members was cast against Granovetter's (1973) concept of the strength of ties and relationships were categorized as absent, weak, or strong. It should be noted that all respondents from a work group shared knowledge as a result of their working in the field of education and

in the same district. However, according to Granovetter (1973), the absence of a tie signifies both the lack of an identified relationship and those without substantial significance. Absent ties are the weakest ties; therefore, they are significant to this study in that weak ties are more likely to connect people to information beyond what they typically have access to through their strong ties. Using the Network Analysis (Granovetter, 1973) component of the theoretical framework for this study, ties were reported as absent if the respondent did not report a tie with another work group member or if they indicated a tie but described the amount of contact as insignificant.

Information from the work group surveys and follow-up interviews was categorized according to the amount of time, emotional intensity, intimacy, and reciprocal services. As the ties were categorized combinations, or the lack thereof, emerged which provided a reference point for further examination of ties as weak or strong. Summarization of the ties allowed me to view the combination of ties that existed for each individual (Appendix F, Tables F1, F2, and F3). The concept of time was used to verify that a tie existed, but was not used to determine the strength of a tie (Baker, 1994). The combination of ties reported in the categories of emotional intensity, intimacy, and reciprocal services were used to determine the strength of a tie.

The analysis of the strength of ties occurred with the knowledge that individuals within each of the work groups had things in common which created ties to one another. For example, educational background and they all choose to work in the same school district. Therefore, the strength of ties was viewed within the context of the relationships reported. Analysis revealed that within the work groups absent, weak, and strong ties were present.

Strength of Ties Among Granville Work Group Members

The summary of information for Granville School revealed that three categories of ties existed and are reported in Chapter III, Table 4. Strong, weak, and absent ties were present in the work group. Examination of ties revealed that strong ties were primarily present through intimacy (shared knowledge) and reciprocal services (mutual rewards). All of the fourteen respondents reported relationships through shared knowledge and all but one member (G9) reported ties in reciprocal services with other members. Eight respondents (G2, G4, G6, G7, G8, G14, G16, G18, and G19) reported ties categorized as emotional intensity (family/friends). Of those, only two (G16 and G18) were family and they were married to each other. Respondents G2, G6, G14, and G18 reported ties in the category of emotional intensity (friends), but did not report another relationship with that same individual. Such reports resulted in a failure to meet Granovetter's requirement of *a combination* needed to be defined as a strong tie. In each instance the respondent reported the amount of contact with those individuals as monthly. Casting the relationship reported in isolation and the amount of time against the Network Analysis literature, it was determined that Granovetter's (1973) definition of a strong tie was not met because *a combination* was not present in the relationships. Appendix F, Table F1, provides a categorization of ties for all of the Granville curriculum work group members. The largest number of strong ties reported by a group member (G2) was five. One member (G9) reported no strong ties within the group.

The most common weak tie reported occurred in the categories of intimacy (shared knowledge) and reciprocal services (mutual reward). Several relationships were reported in isolation and failed to meet the requirement of *a combination* of categories to

be a strong tie. The largest number of weak ties was reported by respondent G8, who reported weak ties with 14 of the nineteen work group members. Absent ties were the most predominant characterization of the work group and were presented separately from weak ties in Chapter III, Table 4. The absence of ties among Granville work group members was found in abundance with 13 of the 15 respondents reporting the absence of ties with one-half or more of the work group members. Since the absence of a tie is the weakest tie, they are combined with other weak ties and reported in Table 9 along with strong ties.

TABLE 9
Granville Work Group Strong Ties and Weak Ties

Work Group Members	Strong Ties	Weak Ties
G1	4	14
G2	5	13
G3	1	17
G4	2	16
G5	2	16
G6	2	16
G7	2	16
G8	4	14
G9	0	18
G10	-	-
G11	-	-
G12	-	-
G13	-	-
G14	3	15
G15	3	15
G16	3	15
G17	3	15
G18	3	15
G19	3	15

Note. Work group members G10, G11, G12, and G13 did not respond to the survey.

It can be concluded from data analysis that weak ties predominantly characterize the relationships among the curriculum work group in Granville School. The abundance of absent ties is significant in determining the weakness of those ties.

Strength of Ties Among Sutterville Work Group Members

The summary of Network Analysis for Sutterville School revealed that three categories of ties existed. The strong, weak, and absent ties present in the curriculum work group are reported in Chapter III, Table 6. Examination of ties revealed that both strong ties and weak ties were primarily present through intimacy (shared knowledge) and reciprocal services (mutual rewards), with each of the nine respondents reporting relationships in these categories. Two respondents (S6 and S8) reported ties categorized as emotional intensity (family/friends) and of those no family relationships were reported. Appendix F, Table F2, provides a categorization of ties for all of the Sutterville curriculum work group members. Strong ties with other work group members were reported by all respondents. The greatest number of strong ties was eight, reported by S7 and S8, and the fewest strong ties being three, reported by S1 and S2.

Most of the weak ties reported fell in the categories of intimacy (shared knowledge) and reciprocal services (mutual reward). A few of the ties were reported in isolation and failed to meet the requirement of *a combination* of categories to be a strong tie. The largest number of weak ties was reported by S1 and S2, who reported weak ties with five of the nine members. Work group members G7 and G8 reported no weak ties.

None of the work group members reported the absence of a tie with another group member. A summary of absent, weak, and strong ties for the Sutterville work group can be found in Chapter III, Table 6. Analysis of information resulted in all of the relationships reported by respondents being categorized as a strong or weak tie. It can be concluded that strong ties predominantly characterize the relationships among the curriculum work group in Sutterville School. Since the absence of a tie is considered the

weakest tie, the absence of any reported absent tie among the work group members is significant in determining the strength of ties that exist within the group. The dominance of strong ties among the work group members can be seen in the findings reported in Table 10.

TABLE 10
Sutterville Work Group Strong Ties and Weak Ties

Work Group Members	Strong Ties	Weak Ties
S1	3	5
S2	3	5
S3	6	2
S4	7	1
S5	6	2
S6	4	4
S7	8	0
S8	8	0
S9	7	1

Strength of Ties Among Witteville Work Group Members

The summary of the information for the Witteville School revealed that three categories of ties existed and are reported in Chapter III, Table 8. Strong, weak, and absent ties were present in the work group. Examination of ties revealed that strong ties were present through emotional intensity (friends/family), intimacy (shared knowledge), and reciprocal services (mutual rewards). Six respondents reported relationships through emotional intensity, with two (W1 and W4) of those being distant family ties. All ten respondents reported relationships through shared knowledge and reciprocal services with other members. Respondents W9 and W10 reported ties in the category of emotional intensity (friends), but did not report another relationship with that same individual. Such reports resulted in a failure to meet Granovetter's requirement of *a combination* needed to be defined as a strong tie. Respondent W4 reported the amount of contact with those

individuals as monthly and W1 acknowledged the relationship, but did not designate the amount of contact time. Casting the relationships reported in isolation and the amount of time against the Network Analysis literature, it was determined that Granovetter's (1973) definition of a strong tie was not met because *a combination* was not present in the relationships. Appendix F, Table F3, provides a categorization of ties for all of the Witteville curriculum work group members.

Most of the weak ties reported fell in the categories of intimacy (shared knowledge) and reciprocal services (mutual reward). A few of the relationships were reported in isolation and failed to meet the requirement of *a combination* of categories to be a strong tie. The largest number of weak ties was reported by respondent W5, who reported weak ties with seven of the eleven work group members. Seven of the respondents reported absent ties. In order to determine the strength of ties and since absent ties are the weakest ties, absent ties have been merged with other weak ties and reported in Table 11 along with strong ties among work group members.

TABLE 11
Witteville Work Group Strong Ties and Weak Ties

Work Group Members	Strong Ties	Weak Ties
W1	5	5
W2	7	3
W3	-	-
W4	4	6
W5	4	7
W6	3	7
W7	4	7
W8	8	2
W9	7	3
W10	7	4
W11	8	3

Note. Work group members W3 did not respond to the survey.

Four members (W4, W5, W6, and W7) of the work group reported more weak ties than strong, five members (W2, W8, W9, W10, and W11) reported more strong ties than weak, and one member (W1) reported the same number of strong and weak ties.

It can be concluded from this data that both strong and weak ties are common among the curriculum work group in Witteville School. All of the respondents reported strong ties with members of the group; however, all respondents also reported weak ties. Overall, strong ties were slightly more abundant than weak ties.

Summary of Ties Among Work Group Members

The work group survey information was used to analyze the relationships that existed among the members of a curriculum work group assigned by the superintendent of each of the three districts. A greater number of weak ties were reported among the Granville work group, with absent ties being the most dominant characteristic revealed through data analysis. The absence of ties was significant in that it indicates a greater difference between individuals and creates possibilities for change. Strong ties among the

Sutterville work group were more dominant than weak ties, with all members reporting relationships with all other group members. The lack of absent ties, which is the weakest tie and indicated the greatest difference between people, reduces the differences between Sutterville work group members and fosters perpetuation of dominant structures.

Among the Witteville work group members, strong ties were slightly more abundant than weak ties. The difference was so slight that the tendency for perpetuation or change, using only the Network Analysis portion of the data collected for this study, could not be determined.

Collective Analysis of "Work" and "Ties"

Using Heifetz's (1994) technical and adaptive work and Granovetter's (1973) strength of ties, the connection of the "work" and "ties" to perpetuation was sought through empirical data collection, presentation, and analysis. According to Heifetz (1994), engaging individuals in technical work leads to perpetuation of existing culture and engaging individuals in adaptive work leads to change of existing culture. Using Network Analysis, Granovetter (1973) proposes that within groups, strong ties among individuals lead to perpetuation and weak ties lead to change. Using these two components of the theoretical framework for this study, analysis of the empirical information characterizing the "work" and "ties" in combination, theoretically would reveal that superintendents viewing curriculum work as technical would group individuals with strong ties, leading to perpetuation of shared knowledge and familiar ideas. Viewing work as adaptive, would result in work groups consisting of individuals with weak ties, linking those individuals with unfamiliar ideas that afford them more opportunities through expanded knowledge and ideas. The third component of the theoretical framework, Perpetuation Theory (Braddock, 1980; McPartland & Braddock, 1981; Wells & Crain, 1994), was used to analyze the combined data.

Collective analysis of the curriculum "work" in the district and "ties" among work group members assigned by the superintendents was viewed through the lens of Perpetuation Theory (Braddock, 1980; McPartland & Braddock, 1981; Wells & Crain, 1994). Braddock (1980) posits that individuals adjust their behavior to accommodate structural constraints and thus perpetuate these constraints. Wells and Crain (1994) employed the concept of Network Analysis, using the notion of strong and weak ties, in

conjunction with Perpetuation Theory to illuminate how exposure to unfamiliar settings leads to individuals adjusting their behavior and *not* accommodate the structural constraints that lead to perpetuation.

Weak ties between individuals create conditions where members of a group can become familiar with the unfamiliar--with social distant ideas (Granovetter, 1973; Braddock, 1980; Wells and Crain, 1994). When unfamiliar ideas are shared, they become knowledge which individuals can use to adjust their behaviors that accommodate perpetuation. According to Perpetuation Theory (Braddock, 1980), individuals adjust their behavior to accommodate structural constraints, and therefore, perpetuate the constraint. When individuals participate in unfamiliar settings, they become familiar with socially distant ideas of others and adjust their behaviors to *not* accommodate the structural constraints that perpetuate socially familiar practices (Wells & Crain, 1994).

Casting the empirical information reported by the superintendents and the work group members in this study against the literature on Perpetuation Theory (Braddock, 1980; Wells and Crain, 1994), the following characterized the "work" and "ties" reported in this study:

- The Granville superintendent grouped individuals with predominantly weak ties, placed them in unfamiliar settings outside of the school district, and presented them with unfamiliar ideas which were distant from their teaching practices. Given this set of circumstances, change within the school curriculum should occur.
- The Sutterville superintendent grouped individuals with predominantly strong ties, placed them in the familiar setting of their own school, and presented them

with familiar ideas drawn from his long history in the district. Given this set of circumstances, perpetuation within the school curriculum should occur.

- The Witteville superintendent grouped individuals with a near balance of strong and weak ties, placed them in the familiar setting of their own school, and presented them with a mixture of familiar and unfamiliar ideas drawn from his curriculum experience in another district. Given this set of circumstances, the superintendent's tendency to define the curriculum work himself, and the failure to accomplish entwinement of work definition, operationalize, and evaluation, perpetuation within the school curriculum will likely occur more often than change.

Summary of Analysis

The superintendents' interview empirical information was first analyzed through the lens of Technical and Adaptive Work Components (Heifetz, 1994) and the work group members' survey data through the lens of Network Analysis (Granovetter, 1973, 1976, 1995). Secondly, the data were collectively analyzed through the lens of Perpetuation Theory (Braddock, 1980, McPartland & Braddock, 1981; Wells & Crain, 1994).

Analysis of the curriculum work as described by the superintendents revealed that adaptive work components were the most prominent at Granville School and technical work components were the most prevalent at Sutterville School and Witteville School. Analysis of the ties reported by the curriculum work group members revealed that weak ties were dominant within the Granville work group, strong ties were dominant within the Sutterville work group, and a balance of strong and weak ties were present within the

Witteville work group.

Viewed through Perpetuation Theory, leadership practices of the superintendent at Granville School should lead to change in the curriculum. Leadership practices of the superintendents at Sutterville School and Witteville school will likely lead to perpetuation of the existing curriculum.

CHAPTER V

SUMMARY, CONCLUSIONS, RECOMMENDATIONS, IMPLICATIONS AND COMMENTARY

Public schools are organized social entities established to perpetuate the instruction of societal values and norms to the nation's youth and to help society change its norms as information changes (Bidwell, 1995; Deal & Peterson, 1999; Getzels & Guba, 1957; Sarason, 1983; Katz &Kahn, 1966, 1978). This study examined the connection of public school superintendents' leadership practices to the perpetuation and change of school culture. This chapter includes the summary, conclusions, recommendations, implications and commentary gleaned from the empirical information compiled in this study.

Summary of the Study

The study included superintendents from three school districts who use work groups to accomplish curriculum work in their districts and thirty-nine members of curriculum work groups assigned by them. Data collection, presentation, and analysis focused on exploring the connection between public school superintendents' leadership practices and the perpetuation or change of school culture.

Purpose

Through the lenses of leadership theory (Heifetz, 1994), Network Analysis (Granovetter, 1973, 1976, 1995), and Perpetuation Theory (Braddock, 1980; McPartland & Braddock, 1981; Wells & Crain, 1994), the purpose of this study was to examine the

influence of superintendents' leadership practices on perpetuation and change of school culture. Specifically, the following was accomplished:

- Characterization of the "work" (Heifetz, 1994) as defined and operationalized by superintendents and the "ties" (Granovetter, 1973, 1976, 1999) within the work groups assigned by superintendents;
- Analysis of: (a) the "work" through the lenses of adaptive and technical work (Heifetz, 1994), (b) the ties through the lenses of Network Analysis (Granovetter, 1073, 1976, 1995), and (c) the connection of the "work" and "ties" to perpetuation through the lenses of Perpetuation Theory (Braddock, 1980; McPartland & Braddock, 1981; Wells & Crain, 1994);
- Speculation about the relationship of the work and ties to perpetuation and change of school culture;
- Reporting of other realities that may be revealed; and
- Assessment of the usefulness of these lenses for theory, research, and practice.

To accomplish these purposes empirical information was needed.

Data Needs

Data needs were two-fold: (1) empirical information depicting how superintendents' define and operationalize the curriculum work and assign individuals to work groups and (2) information to identify and describe relationships that existed among members of the curriculum work groups assigned by superintendents.

Data Sources

Empirical information was collected from three public school district superintendents and thirty-nine members of a curriculum work group from each district.

Two districts were located in rural communities and one in a metropolitan area. Districts had an enrollment between one thousand and two thousand students in prekindergarten through twelfth grade.

Data Collection

Empirical information was collected using two sources: the long interview and a survey instrument. Follow-up interviews were used as data collection determined the need. Three superintendents were interviewed. Thirty-nine members of curriculum work groups assigned by each superintendent were asked to complete a survey instrument consisting of three parts: (1) a research consent form, (2) a demographic information sheet, and (3) a survey asking participants to select descriptions that best described their relationship to other individuals on the work group. Thirty-four members returned the instruments.

The superintendents were interviewed using questions formulated to allow for analysis based upon Heifetz's (1994) components of technical and adaptive work. All interviews were conducted in the superintendent's office area and were recorded. Following each interview the information was transcribed verbatim and returned to the superintendent to gain additional input and to verify accuracy of information. Two superintendents returned the transcriptions with editorial changes and one superintendent called to acknowledge his acceptance of the information. During analysis of empirical information, follow-up interviews were conducted by telephone with the Granville and Witteville superintendents to clarify some information.

Survey data were collected to identify and categorize the relationships using Granovetter's (1973) four characteristics of ties: amount of time, emotional intensity

(friends/family), intimacy (shared knowledge) and reciprocal services (mutual rewards). Early analysis of the survey responses revealed that additional information was needed to determine reciprocal services. A follow-up question was formulated asking the work group members to identify individuals with whom they traded favors, i.e., cover classes, trade duty, run errands, etc. Follow-up interviews were conducted by telephone and recorded to preserve the integrity of the data.

Data Interpretation and Presentation

An exhaustive literature review preceded data collection. Empirical information was continuously cast against this literature. Information collected from superintendents' interviews were categorized into components of technical and adaptive work (Heifetz, 1994). Information gained from members of the curriculum work groups were categorized using Granovetter's (1973) concepts of time, emotional intensity, intimacy, and reciprocal services. Demographic information concerning respondents' educational and work experiences provided background information about the individuals participating in the study.

Responses from the superintendents' interviews, the work group survey, and the demographic information were formulated into tables to allow for data analysis and presentation. A complete disclosure of responses was made and summary representations in the form of tables assist data analysis and presentation.

Data Analysis

The empirical information was first analyzed individually and then collectively. Individually, the superintendents' interview information was analyzed using the components of technical and adaptive work (Heifetz, 1994) and the curriculum work

group survey information was analyzed using Network Analysis (Granovetter, 1973, 1976, 1999). Collectively, the empirical information characterizing the "work" and "ties" was analyzed through the lenses of Perpetuation Theory (Braddock, 1980; McPartland & Braddock, 1981; Wells & Crain, 1994). The purpose of data analysis was to characterize the curriculum work as perceived by each superintendent and the strength of ties among a work group assigned by him and to relate the "work" and "ties" to perpetuation.

My knowledge and experiences in educational settings influenced the direction of data collection and analysis. In an effort to reduce personal bias, the empirical information was viewed through a theoretical framework presented in Chapter I and grounded in literature reviewed in Chapter II.

Summary of Findings

To maintain consistency with the purpose of this study, findings will focus on the following:

- the characterization of the curriculum work (Heifetz, 1994) as defined, operationalized, and assigned by superintendents and ties (Granovetter, 1973) that exist among members of work groups assigned by the superintendents;
- the connection of the "work" and "ties" to perpetuation (Braddock, 1980; McPartland & Braddock, 1981; Well & Crain, 1994) in identifying and describing these ties;
- the speculation about the relationship of the work and ties to perpetuation and change of school culture; and
- identification of areas for further study.

Characterization of "Work and "Ties"

Empirical information gained from the superintendents' interview data was analyzed through the lens of Technical and Adaptive Work Components (Heifetz, 1994) and the work group members' survey information through the lens of Network Analysis (Granovetter, 1973, 1976, 1994).

Analysis of the curriculum work as described by the superintendents revealed that adaptive work components were the most prominent at Granville School and technical work components were the most prevalent at Sutterville School and Witteville School.

Analysis of the ties reported by the curriculum work group members revealed that weak ties were dominant within the Granville work group, strong ties were dominant within the Sutterville work group, and a balance of strong and weak ties were present within the Witteville work group.

The Connection of "Work" and "Ties" to Perpetuation

The empirical information was first analyzed individually using the theoretical framework components of leadership theory (Heifetz, 1994) and Network Analysis (Granovetter, 1973). The information was then merged and analyzed collectively using Perpetuation Theory (Braddock, 1980, McPartland & Braddock, 1981; Wells & Crain, 1994). The collective analysis illuminated the factors of perpetuation claimed by both Heifetz (1994) and Granovetter (1973). Heifetz posits that technical work leads to perpetuation and adaptive work leads to change. Granovetter contends that strong ties lead to perpetuation and weak ties lead to change. Empirical information was collected and analyzed using their frameworks and when cast against the literature on Perpetuation Theory (Braddock, 1980; McPartland & Braddock, 1981; Wells & Crain, 1994). The

following was found:

- The Granville superintendent grouped individuals with predominantly weak ties, placed them in unfamiliar settings outside of the school district, and presented them with unfamiliar ideas which were distant from their teaching practices. Given this set of circumstances, change within the school curriculum should occur.
- The Sutterville superintendent grouped individuals with predominantly strong ties, placed them in the familiar setting of their own school, and presented them with familiar ideas drawn from his long history in the district. Given this set of circumstances, perpetuation within the school curriculum should occur.
- The Witteville superintendent grouped individuals with a near balance of strong and weak ties, placed them in the familiar setting of their own school, and presented them with a mixture of familiar and unfamiliar ideas drawn from his curriculum experience in another district. Given this set of circumstances, and the superintendent's tendency to define the curriculum work himself which failed to accomplish entwinement of work definition, operationalize, and evaluation, perpetuation within the school curriculum will likely occur more often than change.

The findings are grounded in the work of Braddock (1981) who found that individuals adjust their behavior to accommodate structural constraints and thus perpetuate these constraints and in Wells and Crain (1994) who employed Network Analysis. They used Granovetter's (1973) strength of ties, in conjunction with Perpetuation Theory to illustrate how exposure to unfamiliar settings led to individuals

adjusting their behaviors to no longer accommodate the structural constraints that lead to perpetuation. Analysis of empirical information using Heifetz's (1994) components of work, Granovetter's (1973) strength of ties, and Perpetuation Theory (Braddock, 1980; Wells & Crain, 1994), provided a theoretical framework on which to view the connection between the superintendents' definition and operationalization of curriculum work, the strength of ties among work groups assigned by him, and the perpetuation of familiar and exiting ideas and practices.

Relationship of Work and Ties to Perpetuation and Change of School Culture

Using Heifetz's (1994) technical and adaptive work and Granovetter's (1973) strength of ties, the connection of the "work" and "ties" to perpetuation was sought throughout empirical data collection, presentation, and analysis. The relationship of work and ties to perpetuation and change of school culture can be viewed using the theoretical framework for this study.

According to Heifetz (1994), engaging individuals in technical work leads to perpetuation of existing culture and engaging individuals in adaptive work leads to change of existing culture. Through Network Analysis, Granovetter (1973) proposes that within groups, strong ties among individuals lead to perpetuation and weak ties lead to change. Using these two components of the theoretical framework, analysis of the empirical information characterizing the "work" and "ties" in combination, revealed that superintendents who viewed curriculum work as technical grouped individuals with strong ties; therefore, perpetuating the shared knowledge and familiar ideas of the work group members. The superintendent who viewed work as adaptive, grouped individuals with weak ties which linked those individuals with unfamiliar ideas that afford them more

opportunities through expanded knowledge and ideas that promote change.

Using the third component of the theoretical framework, collective analysis of the curriculum "work" in the district and the "ties" among work group members assigned by the superintendents occurred using the lenses of Perpetuation Theory (Braddock, 1980; McPartland & Braddock, 1981; Wells & Crain, 1994). Braddock (1980) found that individuals adjust their behavior to accommodate structural constraints and thus perpetuate these constraints. Wells and Crain (1994) employed the concept of Network Analysis, using the notion of strong and weak ties, in conjunction with Perpetuation Theory, to illuminate how exposure to unfamiliar settings leads to individuals adjusting their behavior and *not* accommodating the structural constraints that promote perpetuation.

Schools are organized social structures that are culturally constructed to perpetuate the instruction of societal values and norms to youth and to help society change its norms as information changes. How then, does the work we do and ties we establish perpetuate and change? How does what we perpetuate and change as individuals influence school culture? Grounded in the literature review prior to this study and the findings from the empirical information presented and analyzed, I have speculated on how work and ties are related to perpetuation and change of school culture.

The cognitive perspective of culture is drawn from the fields of anthropology and sociology and illuminates the organizational knowledge aspect of culture (Sackman, 1991). Organizational knowledge is the structure of things that individuals have in their minds--their models of perceiving, interpreting, and integrating ideas and practices that they use collectively to make sense of their realities. These socially constructed ways of

knowing are driven by shared thoughts, beliefs, attitudes, values, and orientations which are the result of common learning and shared experiences of the group (Katz & Kahn, 1966, Deal & Peterson, 1999; Schein, 1985). Studies in desegregation (Braddock, 1980) contend that individuals adjust their behavior to accommodate structural constraints and thus perpetuate those same constraints. However, exposure to unfamiliar settings leads to individuals adjusting their behavior and *not* accommodating the structural constraints that lead to perpetuation (Wells & Crain, 1994). When socially distant ideas and unfamiliar knowledge are presented, they become the knowledge which individuals share. Therefore, the superintendent's perspective of the work to be accomplished and the relationships of those individuals he assigns to accomplish the work influences the perpetuation and change of school culture.

Areas for Further Study

One component of this study focused on how superintendents' define and operationalize the curriculum work in the district and assign individuals to work groups. Further study could result by gathering data from others in the district and from documents to determine the relationship between the superintendent's perspectives of curriculum work and the realities of curriculum work in the district.

Another component of the study was to identify and examine the ties within a work group assigned by the superintendent. Further study could result through the study of multiple groups within the same district to determine ties within the group and compare them with ties between the groups.

Implications and Recommendations

For research to be significant, it should: (1) clarify or add to existing theory,

(2) add to the base of knowledge, and (3) inform practice (Hoy & Miskel, 1991). This study has implications for adding to and refining theory, improving practice, and contributing to research.

Theory

The leadership theory (Heifetz, 1994) and Network Analysis (1976) were useful in identifying, characterizing, and analyzing the "work" as defined, operationalized, and assigned by the superintendent and "ties" among work groups assigned by the superintendent. Perpetuation Theory (Braddock, 1980; McPartland & Braddock, 1981; Wells & Crain, 1994) was useful in connecting "work" and "ties" to perpetuation. Using these frameworks, descriptors of curriculum work and relationships of work group members can be categorized and analyzed to illuminate patterns of interaction and the implications of those interactions. These theories proved useful to this study.

Research

Research on leadership has primarily focused on how to implement change within an organization. The model used in this study proposes that both perpetuation and change are important to an organization, like school. Therefore, it is vital for superintendents to know that their practices can lead to perpetuation or change and that their perception of how to define, operationalize, and assign work will determine perpetuation or change of school culture. The interactions among individuals can be illuminated using Network Analysis research and the implications for perpetuation can be considered. This study added to the existing knowledge base of Network Analysis and Perpetuation Theory research as they pertain to group interactions in social settings. Research to examine the strength of ties can be applied to work groups within the school setting.

Practice

The findings of this study seem significant to educational practice since they will allow superintendents to view their practices of work definition, operationalization, and assignment. Also, the implications of this study to the grouping of individuals to accomplish curriculum work is considerable. Findings of the study clearly demonstrate that perpetuation or change is related to how work is defined, operationalized, and assigned and that the mixture of individuals grouped to accomplish the work will determine the emergence of unfamiliar ideas and knowledge which lead to new learning or the perpetuation of familiar ideas through the use of known answers. The literature review for this study provides ample information pointing to the importance of both perpetuation and change within our public schools.

Commentary

The linkage of the leadership practices and the strength of ties to perpetuation or change of school culture offered here is limited--only a fragment of a theory. Reform efforts that look only at how public schools can or should be changed, limit the learning that is needed to generate an understanding that both perpetuation and change are foundational purposes of public schools. By studying what should be perpetuated as well as changed, and how best to perpetuated or change, both perspectives are illuminated for the value they provide to society. The use of Network Analysis to identify and examine the strength of ties in groups assigned to accomplish work in schools merits further research. How could a budgeting work group consisting of weak ties impact how and where funds are spent? How could a work group working on the annual school calendar impact beginning and ending times for the school day or year? What differences could be

found between a community curriculum work group and the state legislature in setting the content of course offerings for students? These and many other areas are avenues for us to search out the possibilities that exist when we take on unfamiliar ideas and knowledge and share those ideas and knowledge with others.

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APPENDIXES

APPENDIX A

Institutional Review Board Approval Form

OKLAHOMA STATE UNIVERSITY

INSTITUTIONAL REVIEW BOARD

Date:	August 9, 1999	IRB#: ED-00-150
Proposal Title:	A STUDY OF THE RELATIONSHIPS BETWEEN SUPERINTENDENTS' LEADERSHIP PRACTICES, SOCIAL NETWORKS, AND PERPETUATION AND CHANGE OF SCHOOL CULTURE	
Principal Investigators(s):	Adrienne Hyle Alice Smith	
Reviewed and Processed as:	Exempt	

Approval Status Recommended by Reviewer(s): Approved

Signature:

Carol Olson, Director of University Research Compliance — August 9, 1999 (Date)

Approvals are valid for one calendar year, after which time a request for continuation must be submitted. Any modification to the research project approved by the IRB must be submitted for approval. Approved projects are subject to monitoring by the IRB. Expedited and exempt projects may be reviewed by the full Institutional Review Board.

APPENDIX B

WRITTEN AND ORAL CORRESPONDENCES:

Statement of Oral Solicitation

Written Correspondence to Superintendent

Research Consent Form (Superintendent)

Written Correspondence to Work Group Participant

Research Consent Form (Work Group Participant)

Statement of Oral Solicitation

Mr./Mrs./Dr. _____, my name is Alice Smith. I am assistant superintendent at Poteau Public Schools and am currently completing my doctorate in educational administration. I would like to briefly tell you about the study for my dissertation and determine if you would help me.

I am studying how the work of the district is defined and operationalized and how work groups are assigned. You would be asked to participate in an initial interview lasting about one to one and one half hours and a follow-up interview if needed; provide me with a list of three work groups, committees, or teams which you have assigned; and complete a short survey and demographics instruments. Members of the work groups, committees, or teams would be asked by me to complete the survey and demographics instruments and participate in a follow-up interview if needed.

If you are willing to participate, I will send you a consent form which more fully explains the processes used to assure integrity of the research study and your confidentially.

Are you willing to participate in the research study?

[If response is "yes"] Once the consent form is signed, I will contact your secretary or you for an interview time. Thank you for your consideration, your assistance in helping me complete my research project is greatly appreciated.

[If response is "no"] Thank you for allowing me to explain my study. Have a nice day.

Note: Contacts who express a desire not to participate will be thanked for their consideration.

September, 1999

Dear Superintendent:

Thank you for agreeing to participate in my research study. The purpose of my dissertation is to explore the leadership of superintendents in Oklahoma public schools by gaining their perspectives about the "work" of curriculum in the district and the make-up of the work groups assigned.

Superintendents will be asked to participate in one or more interviews to be conducted at their convenience. The initial interview consists of some main questions relating to the superintendent's activities and perspectives. The interview procedures will begin in late summer of this year. The interviews will be audio recorded and transcribed verbatim. The transcripts will be analyzed to determine the major themes that emerge from the data. The information will be reported in a narrative case study.

Data will be reported in such a manner that the actual people and places involved in this study cannot be identified directly or through identifiers linked to the subject. Every effort will be made to ensure the confidentiality of respondents. All transcripts and interview tapes will be stored under lock and key. Other than myself, the dissertation advisor is the only other person who may have access to the interview tapes and transcriptions. All source data will be destroyed two years after the study is completed. Confidentiality safeguards including the use of pseudonyms for sites, settings, and respondents.

Please read and sign the enclosed Research Consent Form and return it to me. I will contact you in the near future to schedule an interview time at your convenience.

Respectfully submitted,

Alice Smith

Enclosure: 1

RESEARCH CONSENT FORM
(Superintendent)

I, _____, agree to participate in the research project conducted by Alice Ross Smith. I understand that the data collected during this study will be used by Mrs. Smith to complete the requirements necessary for the completion of a doctoral program of study in the Educational Leadership program at Oklahoma State University, Stillwater, Oklahoma.

By agreeing to participate in this study, I agree to do the following:

1) participate in a personal interview;
2) provide a list of members you have assigned to three work groups within the district;
3) complete the attached survey instrument;
4) provide demographic information on the attached form or through a personal vita; and,
5) participate in a follow-up interview to clarify information and provide additional information if needed.

I further understand:

1) interviews will be tape recorded and transcribed verbatim;
2) all data collected during the study will remain confidential and that access will be limited to the researcher and the dissertation advisor;
3) all source data will be destroyed two years following the satisfactory completion of the Ed.D. program by the researcher;
4) prior to presentation in final form, all data will be encoded and pseudonyms will be used in all text and graphical representations of the data;
5) this research project is being conducted with the intent of contributing to existing research and knowledge regarding leadership practices and the influence of group structure.

This project is conducted as part of an investigation about superintendents' leadership practices and social networks.

I understand that participation in the interviews is voluntary, that there is no penalty for refusal to participate, and that I am free to withdraw my consent and participation in this project at any time without penalty after notifying the project director/dissertation advisor.

Should I wish further information about the research project, I may contact Alice Smith at telephone number 918-647-9869 or 918647-2251. I may also contact the project director/ dissertation advisor, Dr. Adrienne Hyle, Ph.D., School of Educational Studies, College of Education, Oklahoma State University, Stillwater, Oklahoma 74078, telephone (405) 744-7246. I may also contact Sharon Bacher, University Research Services,

203 Whitehurst, Oklahoma State University, Stillwater, Oklahoma 74078, telephone (405) 744-5700.

I have read and fully understand the consent form. I sign it freely and voluntarily. A copy has been given to me.

Date:_____ Time:_____ (a.m./p.m.)

Signed:_____
(Signature of Subject)

I certify that I have personally explained all elements of this form to the subject or his/her representative before requesting the subject or his/her representative to sign it.

Date:_____

Signed:_____
(Project Director/Dissertation Advisor)

September, 1999

Dear Curriculum Committee Member:

Your superintendent has agreed to participate in a network analysis study involving the curriculum committee, of which you are a member. The study is part of my dissertation to explore the leadership of superintendents by gaining their perspectives about the curriculum work within the district and the make-up of the groups assigned by them to carry out the work.

Attached are data collection instruments consisting of a Survey of Work Group Members and Demographic Information sheet. The instruments have been designed to gain information from committee members to complete the study and to take as little time as possible for you to give that information. When the data is compiled a brief interview may be needed to clarify some responses. This can be accomplished through a telephone interview at your convenience. Not all respondents will need to be contacted for additional information, only when clarification is needed.

Data will be reported in such a manner that the actual people and places involved in this study cannot be identified directly or through identifiers linked to the subject. Every effort will be made to ensure the confidentially of respondents. Additional information regarding the study and your participation can be found on the Research Consent Form which needs to be signed and returned with the survey and demographic sheets.

Please return the completed survey, demographics, and consent form to me as soon as possible. A self-addressed, stamped envelope has been provided. If you have questions, please call me at 918-647-2251 during the day or 918-647-9869 during evenings and weekends. Your help is greatly appreciated.

Respectfully submitted,

Alice Smith

Enclosure: 4

RESEARCH CONSENT FORM
(Work Group Participants)

I, _____ , agree to participate in the research project conducted by Alice Ross Smith. I understand that the data collected during this study will be used by Mrs. Smith to complete the requirements necessary for the completion of a doctoral program of study in the Educational Leadership program at Oklahoma State University, Stillwater, Oklahoma.

By agreeing to participate in this study, I agree to do the following:

1) complete the attached survey instrument;
2) provide demographic information on the attached form; and,
3) participate in a follow-up interview to clarify information and provide additional information if needed.

I further understand:

1) interview, if needed, will be tape recorded and transcribed verbatim;
2) all data collected during the study will remain confidential and that access will be limited to the researcher and the dissertation advisor;
3) all source data will be destroyed two years following the satisfactory completion of the Ed.D. program by the researcher;
4) prior to presentation in final form, all data will be encoded and pseudonyms will be used in all text and graphical representations of the data;
5) this research project is being conducted with the intent of contributing to existing research and knowledge regarding leadership practices and the influence of group structure.

This project is conducted as part of an investigation about superintendents' leadership practices and social networks.

I understand that participation is voluntary, that there is no penalty for refusal to participate, and that I am free to withdraw my consent and participation in this project at any time without penalty after notifying the project director/dissertation advisor.

Should I wish further information about the research project, I may contact Alice Smith at telephone number 918-647-9869 or 918647-2251. I may also contact the project director/ dissertation advisor, Dr Adrienne Hyle, Ph.D., School of Educational Studies, College of Education, Oklahoma State University, Stillwater, Oklahoma 74078, telephone (405) 744-7246. I may also contact Sharon Bacher, University Research Services, 203 Whitehurst, Oklahoma State University, Stillwater, Oklahoma 74078, telephone (405) 744-5700.

I have read and fully understand the consent form. I sign it freely and voluntarily. A copy has been given to me.

Date:_____ Time:_____ (a.m./p.m.)

Signed:_____
(Signature of Subject)

I certify that I have personally explained all elements of this form to the subject or his/her representative before requesting the subject or his/her representative to sign it.

Date:_____

Signed:_____
(Project Director/Dissertation Advisor)

APPENDIX C

Interview Protocol

Interview of Superintendents

Initial Interview

Opening Questions:

1. Talk to me about the "work" of this district surrounding the area of curriculum.
2. How did you learn what the curriculum work entails?
3. Who determines the work to be accomplished?
4. Who determines how the work will be accomplished?
5. Talk to me about how members are assigned to curriculum work groups in the district.

   Note: Superintendents will be asked to provide a list of members for one work group in the district.

6. What is your role within this work groups?

   Note: If the superintendents participate in the work group meetings, they will complete a survey for the work group to glean information about his ties to each of the members.

Follow-up Interview

A follow-up interview will be conducted to clarify and/or gain additional information. The follow-up interview will also be used to clarify and/or expand on information gained during the initial interview.

APPENDIX D

SURVEY INSTRUMENTS:

Data Survey Instrument

Survey of Work Group Members

Demographic Information Sheet

Data Collection Instrument

Overview

Network analysis is a social science process to examine the interactions among members of a group. The purpose of this questionnaire is to collect data related to the patterns of interaction among the members of the_____(Name of work group)_____ of your school district.

Types of information requested include:

1) Responses on a survey instrument.
2) Completion of a demographic questionnaire related to individual's education and work experience; and,
3) Follow-up interviews may be requested with some respondents after initial analysis of data in order to clarify data or gain additional information.

Note: Anonymity of all respondents will be protected by encoding all data prior to publication. The district's name and the names of the respondents will not appear in the draft or final work.

Survey of Work Group Members

Instructions:

The descriptions listed below are used to describe a range of relationships. Each description is numbered. Please select the description(s) which best describes your relationship to any of the individuals listed below and place the corresponding number(s) in the blank beside their name. List as many descriptions as apply to the individual. If a description does not "fit" an individual, leave the space beside the name blank. Additionally, estimate the amount of time you are in contact with each person using D for daily, W for weekly, and M for monthly.

Description of relationships	**Amount of time**
1. Teach in the same grade	Daily=D
2. Teach the same subject area	Weekly=W
3. Teach in the same building	Monthly=M
4. Socialize with outside of school	
5. Belong to same civic or religious organization	
6. Grew up in the same community	
7. Related to	

Note: Names of work group members from the list gained from the superintendent will be placed in the first column.

Members of Instructional Improvement Committee	**Number(s) from above list of descriptions of relationships**	**Amount of time**
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

DEMOGRAPHIC INFORMATION SHEET

Please complete the following information:

Name _____

Current position _____

Number of years _____

Degree(s) Earned _____

Institution(s) _____

_____

Area(s) of Certification _____

_____

Previous Work Experience in Education:

Position	**Place**	**# of years**
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Work Experience other than Education:

Please describe:	**# of years**
_____	_____
_____	_____

_____

Thank you for your response and assistance in this research project. If you have questions, please contact me.

Alice Smith

APPENDIX E

SUMMARY OF SURVEY RESPONSES:

Summary of Responses Granville

Summary of Responses Sutterville

Summary of Responses Witteville

Table E1

A summary representation of all choices made by Granville respondents.

Respondent	Description of relationship	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12	G13	G14	G15	G16	G17	G18	G19
G1	1. Teach in same grade																			
	2. Teach in same subject area																			
	3. Teach in same building		D	D	D	D														
	4. Socialize outside of school																			
	5. Same civic/religious group																			
	6. Grew up same community												M	M	M	M				
	7. Related to																			
G2	1. Teach in same grade																			
	2. Teach in same subject																			
	3. Teach in same building	W		M	D	W														
	4. Socialize outside of school				D				W			M								
	5. Same civic/religious group																			
	6. Grew up same community																			
	7. Related to																			
G3	1. Teach in same grade																			
	2. Teach in same subject area					D														
	3. Teach in same building	M	W		D		D													
	4. Socialize outside of school																			
	5. Same civic/religious group																			
	6. Grew up same community	M						M		M			X			X				
	7. Related to																			

(table continues)

Table E1 (continued)

Respondent	Description of relationship	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12	G13	G14	G15	G16	G17	G18	G19
G4	1. Teach in same grade																			
	2. Teach in same subject area																			M
	3. Teach in same building	D	D	D		D														
	4. Socialize outside of school		D				W													
	5. Same civic/religious group																			
	6. Grew up same community																			
	7. Related to																			
G5	1. Teach in same grade									M				M				M		M
	2. Teach in same subject area																			
	3. Teach in same building	D	D	D	D															
	4. Socialize outside of school																			
	5. Same civic/religious group																			
	6. Grew up same community																			
	7. Related to																			
G6	1. Teach in same grade							W												
	2. Teach in same subject area																			
	3. Teach in same building								D	W										
	4. Socialize outside of school		M		W															
	5. Same civic/religious group							W	D			M	W	M		X				
	6. Grew up same community																			
	7. Related to																			

(table continues)

Table E1 (continued)

Respondent	Description of relationship	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12	G13	G14	G15	G16	G17	G18	G19
G7	1. Teach in same grade						D													
	2. Teach in same subject area																			
	3. Teach in same building						D		W	D										
	4. Socialize outside of school																			
	5. Same civic/religious group						D		W			M	M	M						
	6. Grew up same community																			
	7. Related to																			
G8	1. Teach in same grade																			
	2. Teach in same subject area																			
	3. Teach in same building						D	W		D										
	4. Socialize outside of school		W									W								
	5. Same civic/religious group	M		M	M	M	D	W			M	W	W	W	M	M	M	M	M	M
	6. Grew up same community																			
	7. Related to																			
G9	1. Teach in same grade																			
	2. Teach in same subject area																			
	3. Teach in same building						D	D	D											
	4. Socialize outside of school																			
	5. Same civic/religious group																			
	6. Grew up same community																			
	7. Related to																			

(table continues)

Table E1 (continued)

Respondent	Description of relationship	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12	G13	G14	G15	G16	G17	G18	G19
G10	Member did not respond to survey.																			
G11	Member did not respond to survey.																			
G12	Member did not respond to survey.																			
G13	Member did not respond to survey.																			
G14	1. Teach in same grade														D	D				
	2. Teach in same subject area																			
	3. Teach in same building														D	D	D			
	4. Socialize outside of school						M													M
	5. Same civic/religious group									M										
	6. Grew up same community												M							
	7. Related to																			
G15	1. Teach in same grade																			
	2. Teach in same subject area																			
	3. Teach in same building														D		D	D		
	4. Socialize outside of school																			
	5. Same civic/religious group																			
	6. Grew up same community						X													
	7. Related to																			

(table continues)

Table E1 (continued)

Respondent	Description of relationship	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12	G13	G14	G15	G16	G17	G18	G19
G16	1. Teach in same grade																			
	2. Teach in same subject area																		D	
	3. Teach in same building														D	D		D		
	4. Socialize outside of school																			W
	5. Same civic/religious group																		D	
	6. Grew up same community																			
	7. Related to																		D	
G17	1. Teach in same grade																			
	2. Teach in same subject area																			
	3. Teach in same building														D	D	D			
	4. Socialize outside of school																			
	5. Same civic/religious group																			
	6. Grew up same community																			
	7. Related to																			
G18	1. Teach in same grade														M	M	D			
	2. Teach in same subject area														M		D			
	3. Teach in same building																			
	4. Socialize outside of school	M				M		M		M		M	M		M		D	M		D
	5. Same civic/religious group																D			
	6. Grew up same community																			
	7. Related to																D			

(table continues)

Table E1 (continued)

Respondent	Description of relationship	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12	G13	G14	G15	G16	G17	G18	G19
G19	1. Teach in same grade																			
	2. Teach in same subject area																			
	3. Teach in same building																		D	
	4. Socialize outside of school																W		D	
	5. Same civic/religious group									W										
	6. Grew up same community																			
	7. Related to																			

Note. Reporting code: D=daily; W= weekly; M=monthly; and X=no time indicated.

Table E2

A summary representation of all choices made by Sutterville respondents.

RESPONDENT	Description of Relationship	S1	S2	S3	S4	S5	S6	S7	S8	S9		
S1	1. Teach in same grade		D	W	W	W	D	D				
	2. Teach in same subject area											
	3. Teach in same building		D						D			
	4. Socialize outside of school											
	5. Same civic/religious group											
	6. Grew up same community											
	7. Related to											
	8/9/10. Other--Committee work									W		
S2	1. Teach in same grade	D		D	D	D	D	D				
	2. Teach in same subject area											
	3. Teach in same building	D										
	4. Socialize outside of school											
	5. Same civic/religious group											
	6. Grew up same community								X	X		
	7. Related to											
S3	1. Teach in same grade											
	2. Teach in same subject area											
	3. Teach in same building	W	W		W	W	W	W	D	M		
	4. Socialize outside of school											
	5. Same civic/religious group											
	6. Grew up same community											
	7. Related to											

(table continues)

Table E2 (table continued)

RESPONDENT	Description of Relationship	S1	S2	S3	S4	S5	S6	S7	S8	S9		
S4	1. Teach in same grade	D	D			D	D	D				
	2. Teach in same subject area											
	3. Teach in same building					D	D	D	D			
	4. Socialize outside of school											
	5. Same civic/religious group											
	6. Grew up same community		D	W		D	D		D	X		
	7. Related to											
	8. Other (Taught them)						D		D			
	9. Other (Was my teacher)									X		
S5	1. Teach in same grade	D	D	D	D		D	D	D	D		
	2. Teach in same subject area											
	3. Teach in same building	D	D	D	D		D	D	D	D		
	4. Socialize outside of school											
	5. Same civic/religious group											
	6. Grew up same community			D	D		D		D	D		
	7. Related to											
S6	1. Teach in same grade	D	W	W	D	D		D	D	W		
	2. Teach in same subject area											
	3. Teach in same building				D			D	D	W		
	4. Socialize outside of school							D				
	5. Same civic/religious group											
	6. Grew up same community			D	D				D	W		

(table continues)

Table E2 (table continued)

RESPONDENT	Description of Relationship	S1	S2	S3	S4	S5	S6	S7	S8	S9		
S6	7. Related to											
	8. Other (Taught me)				D					W		
S7	1. Teach in same grade	D	D	D	D	D	D					
	2. Teach in same subject area											
	3.Teach in same building								D			
	4. Socialize outside of school											
	5. Same civic/religious group									W		
	6. Grew up same community											
	7. Related to											
S8	1. Teach in same grade	D	D	D	D			D		D		
	2. Teach in same subject area											
	3. Teach in same building											
	4. Socialize outside of school		D							D		
	5. Same civic/religious group											
	6. Grew up same community		D	D	D	D	D					
	7. Related to											
	9. Other(they taught me in school)				D					D		
S9	1. Teach in same grade											
	2. Teach in same subject area											
	3. Teach in same building											
	4. Socialize outside of school											
	5. Same civic/religious group											

(table continues)

Table E2 (continued)

RESPONDENT	Description of Relationship	S1	S2	S3	S4	S5	S6	S7	S8	S9		
S9	6. Grew up same community	M	M	M	M	M	M	M	M	M		
	7. Related to											
	8.Other(I taught them in school)	M	M	M	M	M	M	M	M	M		

Note. Time Reported: D=daily; W= weekly; M=monthly; and X=respondent indicated no time.

Table E3

A summary representation of all choices made by Witteville respondents.

RESPONDENT	Description of Relationship	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	W11
W1	1. Teach in same grade											
	2. Teach in same subject area											
	3. Teach in same building			D								
	4. Socialize outside of school				X							
	5. Same civic/religious group											
	6. Grew up same community											X
	7. Related to				X							
	8. Other (work in the same building)							D				
	9. Other (Co-sponsor student activity)									W	D	
W2	1. Teach in same grade				D		D					
	2. Teach in same subject area											
	3. Teach in same building				D	D	D					
	4. Socialize outside of school											
	5. Same civic/religious group				D					M		
	6. Grew up same community											
	7. Related to											
	10. Other (multiple committee work)	M		M	M			M	M			
W3	Note: Member did not respond to survey .											

(table continues)

Table E3 (table continued)

RESPONDENT	Description of Relationship	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	W11
W4	1. Teach in same grade		D			D	W					
	2. Teach in same subject area											
	3. Teach in same building		D			D	W					
	4. Socialize outside of school											
	5. Same civic/religious group											
	6. Grew up same community	M						M				M
	7. Related to	M										
W5	1. Teach in same grade		D		D		D					
	2. Teach in same subject area							W				
	3. Teach in same building		D		D		D					
	4. Socialize outside of school											
	5. Same civic/religious group	M			D			W	W			
	6. Grew up same community	M	D		D			W				D
	7. Related to											
	8. Other (work in the same building)									W		
	10. Other (other committee work)	M	D	D			D		W	W	W	
W6	1. Teach in same grade	W	W		M	D		W		D		W
	2. Teach in same subject area					D			W			W
	3. Teach in same building		W		M	D						
	4. Socialize outside of school									D		

(table continues)

Table E3 (continued)

RESPONDENT	Description of Relationship	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	W11
	5. Same civic/religious group											
	6. Grew up same community											
	7. Related to											
W7	1. Teach in same grade						D					
	2. Teach in same subject area					D						
	3. Teach in same building	D		D							D	
	4. Socialize outside of school											
	5. Same civic/religious group											
	6. Grew up same community											
	7. Related to											
	10. Other (other committee work)					D	D		D			
W8	1. Teach in same grade											
	2. Teach in same subject area											
	3. Teach in same building						D					D
	4. Socialize outside of school											
	5. Same civic/religious group											
	6. Grew up same community											
	7. Related to											
	8. Other (Work in same building)	W	W	W	W	D	D	D		W	W	D
	10.Other(other committee work)	W	W	W	W	D	D	D		W	W	D

(table continues)

Table E3 (continued)

RESPONDENT	Description of Relationship	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	W11
W9	1. Teach in same grade											
	2. Teach in same subject area											
	3. Teach in same building	D		W				D				D
	4. Socialize outside of school				M						D	
	5. Same civic/religious group											
	6. Grew up same community											
	7. Related to											
	8. Other(work in same building)	D	M	W		W	W				D	
	9. Other (co-sponor student activity)	D	M	W		W	W				D	
	10.Other(other committee work)								M		D	D
W10	1. Teach in same grade											
	2. Teach in same subject area											
	3. Teach in same building											
	4. Socialize outside of school				M					D		
	5. Same civic/religious group											
	6. Grew up same community											
	7. Related to											
	8. Other (Coworker/counselor)	D				W	W					
	9. Other (office staff/duty)	D		D			W	D	W	D		D
	10. Office staff											

(table continues)

Table E3 (continued)

RESPONDENT	Description of Relationship	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	W11
W11	1. Teach in same grade											
	2. Teach in same subject area	D							D	D		
	3. Teach in same building								D			
	4. Socialize outside of school			D		D				D	D	
	5. Same civic/religious group											
	6. Grew up same community	D			M	D		W				
	7. Related to											
	11. Other (teacher of my four children)	D			M	D		W		D		

Note. Reporting code: D=daily; W= weekly; M=monthly; and X=no time indicated.

APPENDIX F

CATEGORIZATION OF WORK GROUP TIES:

Table F1

Table F2

Table F3

TABLE F1

Categorization of Granville Work Group Ties using concept of time, emotional intensity, intimacy, and reciprocal services and summarization of ties as absent, weak, and strong.

Work Group Member	**Time** D-daily W-weekly M-monthly	**Emotional Intensity** (friends/ family)	**Intimacy** (shared knowledge	**Reciprocal Services** (mutual reward)	**Ties absent**	**Ties weak**	**Ties strong**
G1	G2 - D G3 - D G4 - D G5 - D G12 - M G13 - M G14 - M G15 - M		G2 - 3 G3 - 3 G4 - 3 G5 - 3 G12 - 6 G13 - 6 G14 - 6	G3 G2 G4 G5	G6 G7 G8 G9 G10 G11 G16 G17 G18 G19	G12 G13 G14 G15	G2 G3 G4 G5
G2	G1 - W G3 - M G4 - D G5 - W G8 - W G11-M	G4 - 4 G8 - 4 G11 - 4	G1 - 3 G3 - 3 G4 - 3 G5 - 3	G1 G3 G4 G5 G8	G6 G7 G9 G10 G12 G13 G14 G15 G16 G17 G18 G19	G11	G1 G3 G4 G5 G8
G3	G1 - W G2 - W G4 - D G5 - D G6 - D G7 - M G9 - M		G5 - 2 G2 - 3 G4 - 3 G6 - 3 G1 -3,6 G7 - 6 G9 - 6 G12 - 6 G15 - 6	G5	G8 G10 G11 G13 G14 G16 G17 G18 G19	G1 G2 G4 G6 G7 G9 G12 G15	G5

(table continues)

TABLE F1 (continued)

Work Group Member	**Time** D-daily W-weekly M-monthly	**Emotional Intensity** (friends/ family)	**Intimacy** (shared knowledge	**Reciprocal Services** (mutual reward)	**Ties absent**	**Ties weak**	**Ties strong**
G4	G1 - D G2 - D G3 - D G5 - D G6 - W G19-M	G2 - 4 G6 - 4	G1 - 3 G2 - 3 G3 - 3 G5 - 3	G2 G6	G7 G8 G9 G10 G11 G12 G13 G14 G15 G16 G17 G18 G19	G1 G3 G5	G2 G6
G5	G1 - D G2 - D G3 - D G4 - D G9 - M G13-M G17-M G19-M		G1 - 3 G2 - 3 G3 - 3 G4 - 3 G9 - 1 G13 - 1 G17 - 1 G19 - 1	G1 G2	G6 G7 G8 G10 G11 G12 G14 G15 G16 G18	G3 G4 G9 G13 G17 G19	G1 G2
G6	G2 - M G4 - W G7 - W G8 - D G9 - W G11-M G12-T G13-M G15-X	G2 - 4 G4 - 4	G7 - 1, 5 G8 - 3, 5 G9 - 3 G11 - 5 G12 - 5 G13 - 5 G15 - 5	G4 G8	G1 G3 G5 G10 G14 G16 G17 G18 G19	G2 G7 G9 G11 G12 G13 G15	G4 G8

(table continues)

TABLE F1 (continued)

Work Group Member	**Time** D-daily W-weekly M-monthly	**Emotional Intensity** (friends/ family)	**Intimacy** (shared knowledge	**Reciprocal Services** (mutual reward)	**Ties absent**	**Ties weak**	**Ties strong**
G7	G6 - D G8 - W G9 - D G11-M G12-M G13-M		G6 - 3,5 G8 - 3,5 G9 - 3 G11 - 5 G12 - 5 G13 - 5	G6 G8	G1 G2 G3 G4 G5 G10 G14 G15 G16 G17 G18 G19	G9 G11 G12 G13	G6 G8
G8	G1 - M G2 - W G3 - M G4 - M G5 - M G6 - M G7 - W G9 - D G10-M G11-W G12-W G13-W G14-M G15-M G16-M G17-M G18-M G19-M	G2 - 4 G11 - 4	G1 - 5 G3 - 1,5 G4 - 5 G5 - 5 G6 - 3,5 G7 - 3,5 G9 - 3 G10 - 5 G11 - 5 G12 - 5 G13 - 5 G14 - 5 G15 - 5 G16 - 5 G17 - 5 G18 - 5 G19 - 5	G2 G6 G7	none	G1 G3 G4 G5 G9 G10 G12 G13 G14 G15 G16 G17 G18 G19	G2 G6 G7 G11

(table continues)

TABLE F1 (continued)

Work Group Member	**Time** D-daily W-weekly M-monthly	**Emotional Intensity** (friends/ family)	**Intimacy** (shared	**Reciprocal Services** (mutual reward)	**Ties absent**	**Ties weak**	**Ties strong**
G9	G6 - D G7 - D G8 - D		G6 - 3 knowledge G7 - 3 G8 - 3	none	G1 G2 G3 G3 G5 G10 G11 G12 G13 G14 G15 G16 G17 G18 G19	G6 G7 G8	none
G10	----	----	----	----	----	----	----
G11	----	----	----	----	----	----	----
G12	----	----	----	----	----	----	----
G13	----	----	----	----	----	----	----
G14	G6 - M G9 - M G12-M G15-D G16-D G17-D G19-M	G6 - 4 G19 - 4	G9 - 5 G12 - 6 G15 - 3 G16 - 3 G17 - 3	G15 G16 G17	G1 G2 G3 G4 G5 G7 G8 G10 G11 G13 G18	G6 G9 G12 G19	G15 G16 G17

(table continues)

TABLE F1 (continues)

Work Group Member	**Time** D-daily W-weekly M-monthly	**Emotional Intensity** (friends/ family)	**Intimacy** (shared knowledge	**Reciprocal Services** (mutual reward)	**Ties absent**	**Ties weak**	**Ties strong**
G15	G6 - X G14 -D G16 -D G17 -D		G6 - 6 G14 - 3 G16 - 3 G17 - 3	G6 G14 G17	G1 G2 G3 G4 G5 G7 G8 G9 G10 G11 G12 G13 G18 G19	G16	G6 G14 G17
G16	G14 -D G15 -D G17 -D G19 -D G19-W	G18 - 7 G19 - 4	G14 - 3 G15 - 3 G17 - 3 G18 - 2,5	G14 G18 G19	G1 G2 G3 G4 G5 G6 G7 G8 G9 G10 G11 G12 G13	G15 G17	G14 G18 G19
G17	G14 -D G15 -D G16 -D		G14 - 3 G15 - 3 G16 - 3	G14 G15 G16	G1 G2 G3 G4 G5 G6 G7 G8 G9 G10 G11 G12 G13 G19	none	G14 G15 G16

(table continues)

TABLE F1 (continued)

Work Group Member	**Time** D-daily W-weekly M-monthly	**Emotional Intensity** (friends/ family)	**Intimacy** (shared knowledge	**Reciprocal Services** (mutual reward)	**Ties absent**	**Ties weak**	**Ties strong**
G18	G1 - M G5 - M G7 - M G9 - M G11-M G12-M G14-M G15-M G16-M G17-M G19-M	G1 - 4 G5 - 4 G7 - 4 G9 - 4 G11 - 4 G12 - 4 G14 - 4 G16 -4,7 G17 - 4 G19 - 4	G3 - 2 G15 - 1 G19 - 3 G16- 1,2,5,6	G14 G16 G19	G2 G3 G4 G6 G8 G10 G13	G1 G5 G7 G9 G11 G12 G15 G17	G14 G16 G19
G19	G9 - W G16-W G18-D	G16 - 4 G18 - 4	G9 - 5 G18 - 3	G9 G16	G1 G2 G3 G4 G5 G6 G7 G8 G10 G11 G12 G13 G14 G15 G17	none	G9 G16 G18

Note. In time column, D, W, and M represent Daily, Weekly, and Monthly. In columns for Emotional Intensity and Intimacy the number after the dash (-) represents the number of the relationship description from the Work Group Survey:

1. Teach in the same grade
2. Teach in the same subject area
3. Teach in the same building
4. Socialize with outside of school
5. Belong to same civic or religious organization
6. Grew up in the same community
7. Related to
8. Other--none listed by respondents

TABLE F2

Categorization of Sutterville Work Group Ties using concept of time, emotional intensity, intimacy, and reciprocal services and summarization of ties as absent, weak, and strong.

Work Group Member	**Time** D-daily W-weekly M-monthly	**Emotional Intensity** (friends/ family)	**Intimacy** (shared knowledge	**Reciprocal** (mutual reward)	**Ties absent**	**Ties weak**	**Ties strong**
S1	S2 - D S3 - W S4 - W S5 - W S6 - D S7 - D S8 - D S9 - W		S2 - 1, 3 S3 - 1 S4 - 1 S5 - 1 S6 - 1 S7 - 1 S8 - 3 S9 - 10	S2 S6 S7	none	S3 S4 S5 S8 S9	S2 S6 S7
S2	S1 - D S3 - D S4 - D S5 - D S6 - D S7 - D S8 - X S9 - X		S1 - 1, 3 S3 - 1 S4 - 1 S5 - 1 S6 - 1 S7 - 1 S8 - 6 S9 - 6	S1 S7 S8	none	S3 S4 S5 S6 S9	S1 S7 S8
S3	S1 - W S2 - W S4 - W S5 - W S6 - W S7 - W S8 - D S9 - W		S1 - 3 S2 - 3 S4 - 3 S5 - 3 S6 - 3 S7 - 3 S8 - 3 S9 - 3	S1 S2 S4 S5 S6 S7	none	S8 S9	S1 S2 S4 S5 S6 S7
S4	S1 - D S2 - D S3 - W S5 - D S6 - D S7 - D S8 - D S9 - X		S1 - 1 S2 - 1,2,6 S3 - 6 S5 - 1,3,6 S6 -1,3,6,8 S7 - 1,3 S8 - 3,6,8 S9 - 6,9	S2 S3 S5 S6 S7 S8 S9	none	S1	S2 S3 S5 S6 S7 S8 S9

(table continues)

TABLE F2 (continued)

Work Group Member	**Time** D-daily W-weekly M-monthly	**Emotional Intensity** (friends/ family)	**Intimacy** (shared knowledge	**Reciprocal** (mutual reward)	**Ties absent**	**Ties weak**	**Ties strong**
S5	S1 - D S2 - D S3 - D S4 - D S6 - D S7 - D S8 - D S9 - D		S1 - 1,3 S2 - 1,3 S3 -1,3,6 S4 -1,3,6 S6 -1,3,6 S7 - 1,3 S8 -1,3,6 S9 -1,3,6	S3 S4 S6 S7 S8 S9	none	S1 S2	S3 S4 S6 S7 S8 S9
S6	S1 - D S2 - W S3 - W S4 - D S5 - D S7 - D S8 - D S9 - W	S7 - 4	S1 - 1 S2 - 1 S3 - 1,6 S4-1,3,6,8 S6 - 1 S7 - 1,3 S8 -1,3,6 S9-1,3,6,8	S1 S7 S8 S9	none	S2 S3 S4 S5	S1 S7 S8 S9
S7	S1 - D S2 - D S3 - D S4 - D S5 - D S6 - D S8 - D S9 - W		S1 - 1 S2 - 1 S3 - 1 S4 - 1 S5 - 1 S6 - 1 S8 - 3 S9 - 5	S1 S2 S3 S4 S5 S6 S8 S9	none	none	S1 S2 S3 S4 S5 S6 S8 S9
S8	S1 - D S2 - D S3 - D S4 - D S5 - D S6 - D S7 - D S8 - D	S2 - 4 S9 - 4	S1 S2 - 1,6 S3 - 1,6 S4 - 1,6,9 S5 - 6 S6 - 6 S7 - 8 S9 - 6,9	S1 S2 S3 S4 S5 S6 S7 S9	none	none	S1 S2 S3 S4 S5 S6 S7 S9

(table continues)

TABLE F2 (continued)

Work Group Member	**Time** D-daily W-weekly M-monthly	**Emotional Intensity** (friends/ family)	**Intimacy** (shared knowledge	**Reciprocal** (mutual reward)	**Ties absent**	**Ties weak**	**Ties strong**
S9	S1 - M S2 - M S3 - M S4 - M S5 - M S6 - M S7 - M S8 - M		S1 - 10 S2 - 6, 8 S3 - 6, 8 S4 - 6, 8 S5 - 6, 8 S6 - 6. 8 S7 - 6, 8 S8 - 6, 8	S2 S3 S4 S5 S6 S7 S8	none	S1	S2 S3 S4 S5 S6 S7 S8

Note. In time column, D, W, and M represent Daily, Weekly, and Monthly. In columns for Emotional Intensity and Intimacy the number after the dash (-) represents the number of the relationship description from the Work Group Survey:

1. Teach in the same grade
2. Teach in the same subject area
3. Teach in the same building
4. Socialize with outside of school
5. Belong to same civic or religious organization
6. Grew up in the same community
7. Related to
8. Other--I taught them in school
9. Other--they taught me in school
10. Other--Committee work

TABLE F3

Categorization of Witteville Work Group Ties using concept of time, emotional intensity, intimacy, and reciprocal services and summarization of ties as absent, weak, and strong.

Work Group Member	**Time** D-daily W-weekly M-monthly	**Emotional Intensity** (friends/ family)	**Intimacy** (shared knowledge	**Reciprocal** (mutual reward)	**Ties absent**	**Ties weak**	**Ties strong**
W1	W3 - D W4 - X W7 - D W9 - W W10-D W11-X	W4 - 4,7	W3 - 3 W7 - 8 W9 - 9 W10-9 W11-6	W2 W4 W7 W9 W10 W11	W5 W6 W8	W2 W3	W4 W7 W9 W10 W11
W2	W1 -M W3 -M W4 -D W5 -D W6 -D W7 -M W8 -M W9 -M		W1-10 W3-10 W4-1,3,5,10 W5 -3 W6 -1,3 W7 - 10 W8 - 10 W9 - 5	W1 W3 W4 W5 W7 W8 W9	W10 W11	W6	W1 W3 W4 W5 W7 W8 W9
W3	----	----	----	----	----	----	----
W4	W1 -M W2 -D W5 -D W6 -W W7 -M W11-M	W1 -7	W1 -6 W2 -1,3 W5 -1,3 W6- 1,3 W7 - 6 W11 - 6	W1 W2 W5 W6	W3 W8 W9 W10	W7 W11	W1 W2 W5 W6
W5	W1 -M W2 -D W3 -M W4 -D W6 -D W7 -W W8 -W W9 -W W10-W W11-W		W1-5,6,10 W2-1,3,6,10 W3 -10 W4-1,3,5,6 W6-1,3,10 W7-2,5,6 W8-5,10 W9-8,10 W10-10 W11-6	W2 W4 W6 W8	none	W1 W3 W5 W7 W9 W10 W11	W2 W4 W6 W8

(table continues)

TABLE F3 (continued)

Work Group Member	**Time** D-daily W-weekly Mmonthly	**Emotional Intensity** (friends/ family)	**Intimacy** (shared knowledge)	**Reciprocal** (mutual reward)	**Ties absent**	**Ties weak**	**Ties strong**
W6	W1 -W W2 -W W4 -M W5 -D W7 -W W8 -W W9 -D W11-W	W9 -4	W1 -1 W2 -1,3 W4 -1,3 W5 -1,2,3 W7 -1 W8 -2 W9 -1 W11 -1,2	W5 W8 W9	W3 W10	W1 W2 W4 W7 W11	W5 W8 W9
W7	W1 - D W3 - D W5 - D W6 -W W8 - D W10-D W11-M		W1- 3 W3- 3 W5 - 2,10 W6 - 1,10 W8 - 10 W10 - 3	W1 W3 W8 W9 W10 W11	W2 W4 W9 W10	W5 W6 W11	W1 W3 W8 W10
W8	W1 -W W2 -W W3 -W W4 -W W5 -D W6 -D W7 -D W9 -W W10-W W11-D		W1 - 8,10 W2 - 8,10 W3 - 8,10 W4 - 8,10 W5 - 8,10 W6-3,8,10 W7 - 8,10 W9 - 8,10 W10-8,10 W11-3,8,10	W2 W3 W5 W6 W7 W9 W11	none	W1 W4	W2 W3 W5 W6 W7 W9 W10 W11
W9	W1 -D W2 -M W3 -W W4 -M W5 -W W6 -W W7 -D W8 -M W10-D W11-D	W4 - 4 W10 - 4	W1 -3,8,9 W2 -8,9 W3 -3,8,9 W5 -8,9 W6 -8,9 W7 - 3 W8 - 10 W10-8,9,10 W11-3,10	W1 W2 W3 W6 W7 W10 W11	none	W4 W5 W8	W1 W2 W3 W6 W7 W10 W11

(table continues)

TABLE F3 (continued)

Work Group Member	**Time** D-daily W-weekly Mmonthly	**Emotional Intensity** (friends/ family)	**Intimacy** (shared knowledge	**Reciprocal** (mutual reward)	**Ties absent**	**Ties weak**	**Ties strong**
W10	W1 - D W3 - D W4 -M W5 -W W6 -W W7 - D W8 -W W9 - D W10-X W11-D	W4 - 4 W9 - 4	W1- 8,9 W3 - 8,9 W5 - 9 W6 - 8,9 W7 - 8 W8 - 8 W9 - 8 W11 - 8	W1 W3 W6 W7 W8 W10 W11	W2	W4 W5 W10	W1 W3 W6 W7 W8 W9 W1
W11	W1- D W3- D W4- M W5- D W7- W W8- D W9- D W10-D	W3 - 4 W5 - 4 W9 - 4 W10- 4	W1- 2,6,11 W4 - 6,11 W5 - 6,11 W7 - 6,11 W8 - 2,3 W9 - 2,11	W1 W3 W4 W5 W7 W8 W9 W10	W2 W6 W11	none	W1 W3 W4 W5 W7 W8 W9 W10

Note. In time column, D, W, and M represent Daily, Weekly, and Monthly. In columns for Emotional Intensity and Intimacy the number after the dash (-) represents the number of the relationship description from the Work Group Survey:

1. Teach in the same grade
2. Teach in the same subject area
3. Teach in the same building
4. Socialize with outside of school
5. Belong to same civic or religious organization
6. Grew up in the same community
7. Related to
8. Other--Work in the same building
9. Other--Co-sponsor student activity
10. Other--Committee work
11. Other--Teacher of my four children

VITA

Alice Ross Smith

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Doctor of Education

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