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School Culture And The Potential For Teacher Leadership Perceived By Principals And Teachers In New Jersey Elementary Schools

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SCHOOL CULTURE AND THE POTENTIAL FOR TEACHER LEADERSHIP
PERCEIVED BY PRINCIPALS AND TEACHERS IN NEW JERSEY
ELEMENTARY SCHOOLS

BY

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Submitted in Partial Fulfillment
of the Requirements for the Degree
Doctor of Education
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CHAPTER I

Statement of the Problem

Introduction

In recent years, (Bennis & Nanus, 1985) research has focused on the development of teacher leaders by the leader who "... commits people to action, who converts followers into leaders, and who may convert leaders into agents of change"(p.3). Lambert states (1998) "... we need to address the capacity of schools to lead themselves. We need to rethink both leadership and [leadership] capacity building" (p. 17).

While principals play a role in developing teacher leaders (Buckner & McDowelle, 2000), teachers need to be viewed by principals as leaders. It is essential that the principal supports a constructive school culture both for reform and for the development of teacher leaders (Ash & Persall, 2000; Childs-Bowen, Moller, & Scrivner, 2000).

Cranston (2000) states that teacher leadership has become critical for school improvement. He writes that as the job of the principal changes, there are gaps in

school leadership that need to be filled by teachers. He also posits that the leadership demands on teachers are becoming more multifaceted and that the issue of teacher leadership is becoming critical for continuing school improvement.

Neuman (2000) suggests that today's principals are being asked to assume more responsibilities. There is the expectation to create viable cultures that support collegiality and support reflection and risk taking. Principals are asked to "...develop and keep the school's or district's vision, articulate and model core values, ensure the inclusion of all voices, develop collaborative learning experiences—and keep the buses running on time" (p. 10). As the demands on the principal increases, leadership can no longer be isolated in one person. Neuman posits that leadership needs to be distributed so that principals and teachers share the responsibility of educational leadership.

Barth (1990), supports the idea that the successful principal will approach leadership as a joint venture with the teacher. He suggests that it has become increasingly important for the principal to "...share leadership and to no longer aspire to fully understand and control every aspect of the school" (p. 133).

Cunningham and Gresso (1993), speak to the idea that an atmosphere of collaboration is an indicator of an effectual organizational culture. Blasé and Kirby (1992) reported that principals who were open and effective in their interactions with staff encouraged teacher participation in planning and achieving the goals of the school.

The opportunity for teacher leadership and empowerment needs to be examined within the culture it supports. School culture provides a sense of purpose to those in the organization (Sergiovanni, 2000). Principal and teacher leaders will talk openly and freely with staff in an atmosphere of non-threatening interaction to provide growth and support (Blasé & Kirby, 1992).

Leaders should create networks that bring about two-way communication (Ash & Persall, 2000) and formulate a design that "...engages both the principal and teachers in making important decisions about improving schools" (Childs-Bowen et al., 2000, p.28). Firestone and Wilson (1993), speak to the idea that a constructive school culture can promote the school's effectiveness and that cultural linkages will determine what teachers want to do.

Parry (2000) in a study on leadership and culture in New Zealand states that organizations are subject to specific cultural norms. He suggests "... in any investigation of leadership it is necessary to understand culture as it impacts and influences organizational life" (p. 36).

Maier and Burke (1993), state that "If you can begin to assess school culture in a standardized fashion, then it is possible for any given school to assess its character, evaluate it and then begin to consider change" (p. 45). In support of Maier and Burke's suggestion, this study will use the Organizational Culture Inventory ® Human Synergistics International to assess the culture of selected elementary schools in New Jersey and the associated potential for teacher leadership. Cooke and Lafferty developed the OCI to measure behavioral norms, which are aspects of culture that most directly affect the daily performance and behaviors of members of the organization (Cooke & Szumal, 1993).

Purpose

The purpose of this study is to assess organizational culture of schools and the associated potential for teacher leadership as perceived by teachers

and principals in selected elementary schools in New Jersey.

Statement of the problem

This study will examine school culture as perceived by principals and teachers and the associated potential for teacher leadership in selected elementary schools in New Jersey.

Romanish (1991), makes note that at a time in education when teachers are willing to take on a leadership role, it is the principal who appears to place obstacles in their way. Teachers find it frustrating to strive to become leaders and take on extra responsibilities when, in reality, the principal is closely monitoring each detail (Gehrke & Romerdahl, 1997).

It is the building of teacher capacity to influence the direction of the school and its goals that impacts the growth of individual teachers (Saxl & Miles, 1988). Barth (1990) states, "...it is increasingly important to share leadership" (p. 133). Parry's (2000) research suggests that people experience greater growth in cultures that emphasize interpersonal values and leaders within this type of culture are models and mentors.

In their research, Blasé and Anderson (1995) speak to facilitative leadership on the part of the principal as leading to the development of shared governance structures and an organizational culture that supports individual teacher autonomy. They also posit that the negative impact of authoritarian leadership on a school's culture supports the position that direct organizational control is counter productive.

Research problem

Based upon teachers' and principals' perceptions of school culture, what is the associated potential for teacher leadership?

Sub problems

1. What effect does gender have upon principals' and teachers' perception of school culture and the associated potential for teacher leadership?
2. What effect does educational level have upon principals' and teachers' perception of school culture and the associated potential for teacher leadership?

3. What effect does age have upon principals' and teachers' perception of school culture and the associated potential for teacher leadership?
4. What effect do years with the school district have upon principals' and teachers' perception of school culture and the associated potential for teacher leadership?
5. What effect does a school district's District Factor Grouping have upon principals' and teachers' perception of school culture and the associated potential for teacher leadership?
6. Is there a statistically significant difference in the perceptions of principals and teachers as to the organizational culture of schools?

Definition of terms

Organizational culture

The definitions of organizational culture are as varied as the sources from which they come. Sinclair (1993) describes culture as having deep seeded and enduring values. Deal (1985) says that culture is an expression that tries "... to capture the informal, implicit side of business or any human organization" (p.605). Deal (1993) also states that culture is made up

of stable social meanings that form our beliefs and behaviors not in the present but over time. Bolman and Deal (1997) posit that some people believe organizations have culture while others believe that organizations are culture.

Deal and Kennedy (1982) define culture as "...the way we do things around here"(p.4). Schein (1992), defines culture as:

... a pattern of shared basic assumptions that a group learned as it solved problems of external adaptation and 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 (p.12).

Wren (1999) describes culture as the "...values and symbols that affect the organizational climate" (p. 543). It has also been suggested (Cunningham & Gresso, 1993) that culture sets the parameters for the operation of the organization that is most acceptable to the individual and to the group.

Leadership

There have been many studies recently concerning leadership but "...for most of us leadership is an elusive concept" (Patterson, 1993, p. 2). Patterson says leadership is defined as the process of influencing others to achieve mutually agreed upon purposes for the organization. Bolman and Deal (1997) state effective leaders help establish a vision, set standards for performance, and create focus and direction for collective efforts" (p.297). They all believe that leadership is a mutual process.

Sergiovanni (1996) places leadership in a moral context and says that leadership is moral authority that comes from shared agreements and compacts. Leadership can mean "...the reciprocal learning process that enable participants to construct and negotiate meanings leading to a shared purpose of schooling" (Lambert, 1998, p.9).

Teacher leadership/empowerment

In some of the research (Blasé & Anderson 1995; Blasé & Blasé, 1997; Romanish, 1991) the term empowerment is used interchangeably with leadership. This study will also include research on teacher empowerment as it relates to organizational culture of schools.

Vasquez-Levy and Timmerman (2000) define teacher leadership as intellectual leadership beyond the classroom where by teaches identify problems, create solutions, test premises, and think innovatively. Teacher leadership and empowerment (Barth, 2001) is defined as choosing instructional materials and determining curriculum; setting standards and goals for self and for the school; selecting new teachers and administrative staff members; input into school budgets; evaluating teacher performance, and designing staff development.

Hoy and Sweetland (2000) suggest that teacher leadership and empowerment encompass the ability of teachers to control vital decisions that impact upon teaching and learning. Lambert (1998) developed a leadership matrix in which high participation and high skillfulness in teacher leadership is defined as: "Broad-based, skillful participation in the work of leadership; inquiry-based use of information to inform decisions and practice; roles and responsibilities that reflect broad involvement and collaboration; reflective practice/innovation as the norm; high student achievement" (p. 13).

For the purpose of this study, teacher leadership is defined as the potential opportunity for participation in

setting educational and school goals, and for participation in developing curriculum and instruction. Teacher leadership is further defined as the potential opportunity for reflective practice and innovation, and for collaboration with colleagues including the principal in the decision making process within the existing organizational culture of the school.

Behavioral norms

Behavioral norms (Cooke & Szumal, 2000) are defined as the thinking and behavioral styles that might be necessary to function and to fit in within an organization. The norms stipulate the way in which members of the organization are expected to carry out their work and form relationships with others in the organization.

These behavioral norms are viewed as important pieces of an organization's culture as they reveal the values and beliefs that members of the organization hold in common. Cunningham and Gresso (1993) suggest that "Behavior denotes the way that various roles and responsibilities within the organization are approached and forms the work process of the organization" (p.30).

Organizational Culture Inventory

"The Organizational Culture Inventory ® Human Synergistics International is a self-reporting paper-pencil diagnostic task designed to measure normative beliefs and shared behavioral expectations in organizations" (Cooke & Szumal 1993 p. 1299). These twelve sets of beliefs are related and may be classified into three general types of organizational cultures, Constructive, Passive-Defensive, and Aggressive-Defensive (Cooke & Szumal 1993).

Cooke and Szumal (1993) present three types of cultures: The Constructive Culture where members are encouraged to interact with others and approach tasks in ways that will help them meet their higher-order satisfaction needs. This type of organizational culture is characterized by Achievement norms, where individual effort is important and people are encouraged to take on challenging tasks; Self-actualizing norms, where change is encouraged and creative problem solving is valued; Humanistic-Encouraging norms, where conflicts are resolved constructively and opportunities are available for joint decision making; and Affiliative norms, where the organization and its members show a concern for others and the atmosphere is open and friendly.

The Passive-Defensive Culture where members believe they must interact with people in ways that will not threaten their own security. This type of organizational culture is characterized by Approval norms, in which goals are set to please others and support goes to those with the most authority; Conventional norms, where rules are treated more importantly than ideas and the goals that are set are predictable in nature; Dependent norms, in which people are expected to be good followers and others are not challenged and Avoidance norms, where conflict is to be avoided and there is a difficulty in making decisions.

The Aggressive-Defensive Culture where members are expected to approach tasks in forceful ways to protect their status and security. This type of organizational culture is characterized by Oppositional norms, where new ideas are opposed and there is a critical atmosphere; Power norms, in which there is little confidence in others and there is a belief in force; Competitive norms, where there is a strong need to win and there is competition rather than cooperation; and Perfectionist norms where unrealistic goals are set and self-induced stress is created (From *Organizational Culture Inventory* by R. A. Cooke and J. C. Lafferty, 1983, 1986, 1987, 1989,

Plymouth, MI: Human Synergistics, Copyright 1989 by Human Synergistics, Inc. Adapted by permission).

District Factor Group

The school districts in the State of New Jersey are, and have been since 1975, ranked by socioeconomic levels. Originally, the District Factor Group (DFG) was developed for use in the reporting of test scores. However, at the same time, issues of equitable financial support for districts had become a state Supreme Court case (Robinson v. Cahill). (New Jersey Department of Education web site 2001 <http://www.state.nj.us/njded/finance.sf/dfgdesc.doc>).

Discussion before the court in Robinson v. Cahill and later in Abbott v. Burke (New Jersey Department of Education web site 2001 <http://www.state.nj.us/njded/finance.sf/dfgdesc.doc>) took into account the DFG and socioeconomic status of a district when determining funding provisions. This system is a method of ranking school districts in New Jersey by their socioeconomic status (SES). This was first introduced by the New Jersey Department of Education in 1975, based on data from the 1970 decennial Census. A revision was made in 1984 to take into account new data from the 1980 Census and to

change slightly the theoretical model of socioeconomic status (New Jersey Department of Education web site 2001 <http://www.state.nj.us/njded/finance.sf/dfgdesc.doc>).

The idea of designating DFG groups was motivated by research conducted in the late 1960's and early 1970's that showed a strong relationship between socioeconomic status and educational outcomes. The creators of the DFG were concerned that educational policymakers, after reviewing testing data obtained in different districts, would make unjustified inferences about the importance of various school-based inputs to the educational process. The research showed that what students bring to school, including socialization that takes place before they step inside the school building, is the most important determinant of educational outcomes. Implicit in this idea is that the effectiveness of school systems cannot be judged without reference to the socioeconomic background of their students (New Jersey Department of Education web site 2002 <http://www.state.nj.us/njded/finance.sf/dfgdesc.doc>).

The DFG is an index of socioeconomic status that is created using data from several indicators available in the decennial Census of Population. Socioeconomic status

is not measured directly. Rather, the literature holds that it is a function of other, measurable quantities (traditionally, the basic three are income, occupation, and education). Therefore, the DFG is an index created using statistical procedures, a model of socioeconomic status, and input data for various socioeconomic traits. Seven indices were developed from the 1990 census data and updated again in 1992:

- A. Percentage of adult residents who failed to complete high school
- B. Percentage of adult residents who attended college
- C. Occupational status of adult household members:
 - 1. laborers
 - 2. service workers (except private and protective)
 - 3. farm workers
 - 4. operatives and kindred workers
 - 5. protective service workers
 - 6. sales workers
 - 7. clerical and kindred workers
 - 8. craftsmen, foremen, and kindred workers
 - 9. quasi-professionals
 - 10. managers, officials, and proprietors

11.old and new professionals

D. Population density: persons per square mile

E. Income: median family income

F. Unemployment: percentage of those in the workforce who received some unemployment compensation

G. Poverty: percentage of residents below the poverty level

These seven indices were analyzed to produce a score that ranked districts according to a single measure of socioeconomic status. Districts were then grouped so that each group would consist of districts having factor scores within an interval of one tenth of the distance between the highest and lowest scores. (New Jersey Department of Education web site 2001 <http://www.state.nj.us/njded/finance.sf/dfgdesc.doc>).

The DFG's based on the 1980 census resulted in ten groups whereas the DFG's based upon the 1990 census, resulted in eight DFG designations. The New Jersey Department of education is currently using the 1992 updated designations and has not recalculated the variables to the 2000 census as of this writing. (New Jersey Department of Education web site 2001 <http://www>.

state.nj.us/njded/finance/sf/dfgdesc.doc). The indicator, number of districts in each DFG, and the percentages are found in Table 1.

The researcher for the purpose of this study defined the terms that follow.

Elementary School

An elementary school is defined as a public school that contains the grade configurations of K-3, K-5 and/or K-8.

Teacher

A teacher is defined as a person who holds certification to teach as defined by the State of New Jersey and who is currently working under that certification in a full time teaching position in a public elementary school in the State of New Jersey.

Principal

A principal is defined as a person who holds certification as a principal as defined by the State of New Jersey and is currently working in a public elementary school under that certification.

Table 1

New Jersey's District Factor Grouping

1992 Data

<u>DFG Rank</u>	<u>Number of Districts</u>	<u>Percent of Total</u>
A	35	06.1
B	78	13.6
CD	75	13.0
DE	100	17.5
FG	87	15.2
GH	78	13.6
I	105	18.3
J	15	02.6
Total	Total	Total
8	573	99.6

(New Jersey Department of Education web site

<http://www.state.nj.us/njded/schools/achievement/dfg.htm>)

Superintendent

A Superintendent is defined as a person who holds certification as a School Administrator as defined by the State of New Jersey and is currently working in a public school district under that certification and in that position.

Superintendent/Principal

A Superintendent/principal is defined as a person who holds certification as School Administrator as defined by the State of New Jersey; and, is currently working as both the Superintendent and Principal in a public school district in New Jersey

Significance of the Study

With the movement towards the sharing of leadership (Barth, 1990) it is increasingly important to determine in what organizational cultures is there an associated potential for teacher leadership. If the principal is the shaper of school culture as Deal (1985) suggests, then it is critical to research their and their staffs' perceptions as to what culture exists within the school.

Administrative subcultures, according to Deal (1985) have been obsessed with authority and control which puts them in direct conflict with opportunities for teacher

leadership. In this respect, according to Sergiovanni (1992), it is the job of the leader, to focus on removing obstacles from the paths of teachers and to provide emotional support for the pilgrimage.

The cultural elements of an organization are a learned and shared group of responses to the organizational environment (Schein, 1985). Argyris (1964) states that the culture in "...which the [individual] is embedded can influence the individual and the organization" (p. 34). This study will examine perceived organizational culture and the associated potential for teacher leadership within a school. "...[C]ulture affects the satisfaction and performance of organizational members" (Cooke & Szumal, 1993, p. 1321).

This study is significant in that there is little primary research done in the field of education in New Jersey relating to the organizational culture of schools and the associated potential for teacher leadership. This research will provide an opportunity for superintendents, principals, and teachers to assess organizational culture of schools and the associated potential for teacher leadership and will provide data for reflection and adjustment to the pervasive culture of the school.

Limitations of the study

1. This study is quantitative and is subject to the designs of that method of research.
2. The number of participants in the survey (169 teachers and 13 administrators) might have an impact upon the results. The results of a survey are dependent upon the quality of the population and/or the representative sample (Leedy, 1997).
3. The research was conducted in New Jersey public elementary schools only.
4. The research was conducted in one of the twenty-one counties in the State of New Jersey.
5. The study took place in the following four of the eight school District Factor Groups in New Jersey; CD, DE, FG, GH.
6. The survey used in this research is only a snapshot of the organizational culture of the school and the associated potential for teacher leadership. The pervasive culture may have been different in the past and might be so in the future.
7. The survey instrument, The Organizational Culture Inventory® Human Synergistics International, (Cooke & Lafferty, 1983) is subject to limitations that is part of the construction of the survey.

CHAPTER II

Review of The Literature

Introduction

This study examined the organizational culture of schools and the associated potential for teacher leadership as perceived by teachers and principals in selected elementary schools in New Jersey.

The research was completed in elementary schools in districts that were classified in the District Factor Groups of CD, DE, FG and GH within one central New Jersey county. The study used quantitative analysis of data and employed a survey, the Organizational Culture Inventory® Human Synergistics International (Cooke & Lafferty, 1983, 1987, 1989) to collect the statistics. Both principals and teachers in the selected schools were asked to complete the survey.

Much has been written on leadership in schools (Barth, 1990; Cunningham & Gresso, 1993; Fairholm, 1994; Rost, 1993; Sashkin & Sashkin, 1993; Schlechty, 1990;

Sergiovanni, 2000, 1996, 1994, 1992,) and on organizational culture (Argyris, 1964; Carlson 1996; Deal & Peterson, 1999; Hughes,1994; Meek, 1988; Moran & Volkwein, 1992; Schein, 1992; Sergiovanni 1994; Sinclair, 1993;). The review of the literature in this study examined the areas of organizational culture, leadership, principal leadership and school culture, and teacher leadership/empowerment and school culture. As this study investigated the connection between these concepts, literature was also reviewed that dealt with the inter-relatedness of the topics.

Organizational Culture

Organizational culture is the pattern of basic assumptions that a given group has invented, discovered, or developed in learning to cope with its problems of external adaptation and internal integration, and that have worked well enough to be considered valid, and, therefore, to be taught to new members as the correct way to perceive, think, and feel as related to those problems. (Schein, 1985, p. 3)

The definitions and perspectives on organizational culture are as many and as varied as the authors who have written articles and books. Whatever the perspective, Schein (1985) stated that organizational culture exists and it is important.

Culture within an organization may influence that organization in "...terms of the values inculcated into the managerial class which in turn influences the organization" (Argyris, 1964, p. 16). Culture has also been framed in terms of product and process. Bolman and Deal (1991) believe that every organization over time develops very specific beliefs and patterns.

Cunningham and Gresso(1993) suggest that a potent work culture exhibits an atmosphere of collegiality where individuals are supported, understood and cared for by each other. Bates (1984) posits that "...culture is beliefs, languages, rituals, knowledge, conventions, courtesies and artifacts from which individuals and social identities are born" (p.262). Cooper states that cultures grow and flourish and are not made (1988).

Deal and Kennedy (1982) examined corporate cultures in the United States. Their interviews revealed that a strong culture was essential to the health of the

organization. Their findings suggested that a strong culture embodies a set of informal rules that people follow and that this strong culture allows people to gain an intrinsic value attached to what they do within the organization. Deal and Kennedy's (1982) writing further suggest that a strong culture revolved around values, heroes, rites and rituals, and communication.

Sinclair (1993) gives a working understanding of culture when she writes that a culture is made up of the things that people believe in and about how things work within the organization. Simms (2000) believes that over the years culture has become a general way to describe the internal workings of organizations.

Deal states (1993) that discernible cultural forms are part of the "...ways of a people, or a classroom, or a school" (p.6) and Argyris (1964) takes this further when he posits that one cannot under estimate the importance of the control that the cultural environment holds over the inside workings of the organization. The culture of an organization is a combination of external pressures, responses to events, internal opportunities and a response to chance that evolves over time (Schein, 1992). Schein (1985) states that culture is evolutionary in nature.

This is expanded by the work of Aycan, Kanungo and Sinha, (1999), and supports the concept that organizations are complex systems that evolve and operate in a fluid and interrelated environment. Culture may be seen as the characteristic of specific social groups. Culture occurs when the interaction between individuals has been sufficient enough for the individuals to have acquired shared views and when these shared views become so ingrained as to be taken for granted (Moran & Volkwein, 1992). Deal (1993) suggests that culture is the entwined patterns of human images and beliefs which become stable over a period and that this information is passed to others where after time it becomes largely invisible to those within the culture.

Bagraim (2001) speaks to different levels of culture. He suggests that organizational culture exists on three levels. The first level is what one can observe and can access easily. The second level of culture, according to Bagraim, is the values that explain the observable behavior. Bagraim (2001) states that the critical level of culture is the third in which "... rests underlying assumptions of the corporate culture..." (p. 45) that may not be recognized by those within the culture and may not be easily changed.

Yukl (1998) suggests that the espoused values of a culture may not truly represent that culture. He continues to state that discerning the real, causal beliefs may be difficult due to this superficial layer of values. He puts forward the idea that organizational culture's function is to give meaning to the environment and help determine the appropriate response to situations. Parry (2000) posits that organizational culture is best described as learned behaviors and different organizations produce different cultures.

When applied to a school setting, the term culture is meant to describe the nature of the school. The nature of the school is based upon deeply held beliefs, values, and customs that have been assimilated over a period of time into the daily course of events (Deal & Peterson, 1990). "Culture helps explain why classrooms and schools exhibit common and stable patterns across variable conditions" (Deal, 1993, p.7).

Deal goes on to suggest that culture in a school is more important than culture in business because of the complex nature of school itself. In supporting Deal's view that schools are complex and deal with intangible issues, Firestone and Wilson (1993) state that the school's culture mold what teachers want to do and supply

answers to such questions as "[W]hat does it mean to teach" (p.25). The work of Sergiovanni (2000) goes on to support the idea that a school culture provides a sense of purpose and a basis for accountability.

Again, this theme of the transience of culture arises in the work of Deal and Peterson (1993) when they posit that character of a school and the deeper meanings, reflections, beliefs and traditions may be described by the school's culture developed over time. They further reflect upon the idea that, as suggested by Aycan, Kanungo and Sinha (1999); Moran and Volkwein, (1992); and Deal, (1993), outside of the conscious awareness of the participants, a school culture exists and that culture determines the patterns of behavior within the school.

Bates (1984) states that "Culture is the prime resource of educational practice..."(p.262) and it is the rituals and myths that are important in the daily energy of the school. As suggested, these cultural patterns, myths and symbols grow over time. They begin when the school opens and are molded, changed and created through change, problems, and celebrations (Deal & Peterson, 1999).

Strati's (1998) research views organizational culture as symbolic in nature. He posits that

organizational culture is both subjective and objective in nature and that it has indistinct boundaries. Bolman and Deal (1997) suggest that organizational culture may be explained through metaphors and symbolic actions and support Strati's thesis when they hypothesize that "... the symbolic frame ... centers on complexity and ambiguity in organizational phenomena..." (p.234).

This disposition to form cultures within schools and other organizations may be attributed to the loose nature of organizations (Carlson, 1996). Sergiovanni states that:

The cultural perspective is particularly important in understanding loosely structured organizations. Such organizations are characterized by a great deal of breathing room for individuals and units despite managerial attempts to tighten and structure things by applying conventional management theories. In loosely structured organizations coordination is difficult, controls are adhered to more by letter than spirit with little effect, and, whether intended or not, individuals enjoy a great deal of discretion. Workers operate independent

of each other; thus close supervision is difficult to practice. (Sergiovanni & Corbally, 1984, p.ix)

Sergiovanni (2000) goes on to say that a school's culture furnishes it with a sense of meaning. Culture allows us to look deeply into the spirit of a school, into its belief system, into its myths and its realm of significance (Sergiovanni & Starratt, 1988).

Cultures in schools and organizations may be positive or toxic. Historically, school cultures do not support values and peoples' needs but instead they foster an atmosphere where by people do not communicate honestly and where collaboration is valued less than competition. School cultures are extremely powerful (Combs, Miser, & Whitaker, 1999).

Peterson and Deal (1998) support the work of Combs, Miser and Whitaker (1999) when they speak to the issue that culture builds over time and is often an unseen stream of norms and values which may be toxic in nature. They state that these toxic cultures produce an environment where negativity is pervasive and failure is the focus of discussion.

Deal and Peterson (1999) present general characteristics of positive cultures. These cultures have

a rich tradition and sense of purpose and value collegiality, learning for all, and quality. There is a positive flow of energy and communication tied to respect and caring. The positive culture embraces symbols and carries on traditions. "The total character of a culture, however, determines in large part the kind of leadership that is exercised" (Fairholm, 1994, p.145). Parry's research (2000) supports both Deal and Peterson and Fairholm in that he suggests that people experience greater growth in cultures that emphasize interpersonal values and leaders within this type of culture are models and mentors. He further states that such cultures encourage innovation and open discussion of ideas.

Batteau (2000), views culture from an anthropological viewpoint. He suggests that culture provides a structure for organizational meaning and a system of reference. As opposed to Schien (1992), Batteau states that culture is not related to behavior but rather related to symbols, stories, and myths which is also supported in the writings of Bolman and Deal (1997).

Leadership

"To an extent, leadership is like beauty; it is hard to define, but you know it when you see it" (Bennis,

1989, p.1). Leadership is a concept that is not easy to define and the definitions vary from author to author. Patterson (1993) states that leadership for the future is defined as "...the process of influencing others to achieve mutually agreed upon purposes for the organization" (p.3).

Modern research and theories of leadership have focused on multiple elements to attempt to explain effective leadership. These multiple variables have been characterized as relating to a leader's vision, morality, and symbolic actions (Bennis, 1989; Blasé,1995; Bolman & Deal,1991, 1997; Deal & Peterson, 1999, Sergiovanni, 1992, 1994, 2000; Sergiovanni & Starratt,1988;). Their writings have focused on a shift in leadership from managers to servant leaders. The leadership literature reviewed here will examine the different facets of leadership both in schools and in other organizations.

Bennis (1989) states that all leaders possess specific characteristics. He defines these characteristics as both a guiding vision in which the leader knows what he or she wants to accomplish and the ability to persevere despite setbacks. He further states that a leader must have passion; a leader inspires and gives hope to others. The third characteristic of

leadership is integrity of which there are three essential parts, "...self-knowledge, candor, and maturity..."(p. 40.).

Bennis (1989) posits that from the quality of integrity, comes trust. Trust is not acquired but is earned through the words and actions of the leader. He goes on to characterize leaders and leadership as having the qualities of "...curiosity and daring..." (Bennis, 1989, p. 41). The leader is a risk taker who learns from mistakes and adversity. According to Bennis, these traits may be learned and are not something with which a person is born.

Senge (1990) supports Bennis' (1989) belief that leaders are created and not born. He writes that natural leadership is the result of hard work over a long period of time and characterizes this effort as the ability to develop communication and notional skills; to contemplate personal values and then to adapt personal values with behavior; to value others and their ideas. He continues to write that leaders are analogous to the designers of ships in the sense that the hard work of leadership will show its benefits in the future. He states that leaders who practice this type of leadership empower others. In his writing he brings leadership theory into the future

and interprets leadership and leaders as designers, stewards and teachers.

The leaders who fare best are those who continually see themselves as designers and not crusaders.... In essence, the leader's task is designing the learning process whereby people throughout the organization can deal productively with the critical issues they face and develop their mastery in the learning disciplines (p. 345). In a learning organization leaders may start by pursuing their own vision, but as they learn to listen carefully to others' visions they begin to see that their own personal vision is part of something larger (p. 352). Leaders in learning organizations have the ability to conceptualize their strategic insights so that they become public knowledge, open to challenge and further improvement... [It] is about fostering learning for everyone. (Senge, 1990, p. 356).

Leadership may also be analyzed as a process. The leader is one who influences the outcomes and events of a

given group. In this view is the concept that leadership is a specialized role based in social influence and the leader's effectiveness is measured by the quality of the group's course of action, and the attitudes of the followers (Yukl, 1998).

Sergiovanni's and Starratt's (1988) theories make three assumptions concerning leadership. There is an implication within leadership that there is a relationship to others; that leadership is not a momentary occurrence but that it is exercised over time; and that leadership takes place in the context of something such as an organization, community or institution. They speak to the idea that leadership is grounded in meaning and emerges from a vision. Lambert et al. (1995) define leadership as a "...reciprocal process..." (p.33) that allows members of the school organization to make meaning towards a common purpose.

It is the leader's job to provide well-founded information that leads to choices coupled with a commitment to the organization. Sergiovanni posits that leaders and especially school leaders must demonstrate morality, stability, sense of direction, and strength of conviction (Sergiovanni, 2000).

Leadership has also been defined as "...making things happen that you believe in or envision"(Barth, 1990. p.124). Leadership may be viewed as an influence relationship between leaders and followers who develop a mutual purpose that will lead to real change. This relationship deals with moral and ethical issues and the influence leaders have over followers (Rost, 1993). Leadership grows when both leaders and those who follow see a reciprocal credibility no matter the source of the leadership (Sergiovanni, 1994).

In a later work, Sergiovanni (2000) states that leadership is more cerebral than interpersonal and that if leadership does not result in action it is "...like a work half finished..." (p.168). He offers the idea that leadership is based on four standards: leaders, followers, idea, and action and all must be present in order for leadership to be effectual.

Fairholm (1994) supports this view of leadership in that he states that the driving force of today's leadership is aimed at perceiving the leader as a developer, not a manipulator of those who follow. He suggests that leadership can only be effective in an organization if trust is present. As a continuation of Fairholm's ideas, Hunt (1991) states that leadership

embodies "...focusing attention on a vision; communicating the vision personally; demonstrating trustworthiness; displaying respect; and taking risks" (p. 196) while Sergiovanni (1992) speaks to leadership as the interdependence and interplay of the hand (decisions, actions and behaviors), the head (mindsapes) and the heart (values) in effecting leadership. Sergiovanni (1992) further states that effective school leadership can create authentic relationships among and between faculty and the principal that enables them to "...tackle such questions as who we are and what do we want to be, the questions that ultimately bind them together and bind them to a set of shared ideals" (p. 201).

Gardner (1999) states that there are four constants to leadership. The first constant is that the leader has a story; the next is the "...extent to which the story or narrative is embodied in the life of the narrator" (p.1011); the third is the attendance of a group that may be influenced by the leader's story; the fourth is the existence of an organization within which leadership is present. Gardner goes on to state that, we tend "... to locate leadership primarily in the person of a designated leader. It is important to realize that leadership can as

well be the burden of a group, an institution, or a powerful cultural symbol..." (Gardner, 1999, p. 1022).

Scholars, such as Heifitz (1994) have come to view leadership as a normative construct: leadership in context. He states that that "...implicit in people's notions of leadership are images of social contract" (p. 14). Duke (1998) sees leadership as a construct that brings meaning to a group and their dealings with members of the group. He believes that leadership is "...an aesthetic phenomenon..." (p.175) because it relies on meaningful perceptions by the followers.

Bolman and Deal (1995), speak to leadership as a moral issue of soul and conscience. This is supported by Hsieh and Shen (1998) in a study that looked into teachers', principals', and superintendents' perceptions of leadership. The results of the study showed that the most important values of leadership were "... honesty, integrity, fairness, care, trust and morality..." (p.117).

Klein and Diket (1999) hypothesize that viewing leadership as art gives hope for organizational rebirth and individual rejuvenation. In viewing leadership as art, they posit that the leader has the ability to connect others to a place grander than oneself through inspiration and transformation. Their writing suggests

"...leadership should be art, not in a completed sense, but rather a work in progress" (Klein & Diket 1999, p. 28).

Principal Leadership and Organizational Culture

"As teachers are expected to do more with less, the principal has become an even more critical figure, capable of both creating and reducing teachers' problems" (Barth, 1990, p. 21). In a study by Day, Harris and Hadfield (2001) characteristics of effective principal leaders were examined. Their study implied that personal values were an underpinning of leadership. These values took the form of respect and caring for others and were based upon moral principles. Their study indicated that principal leadership was linked to organizational skills and capacity building.

Wildy and Loudon (2000) note that principals need to demonstrate leadership that is both "...strong and shared..." and "...democratic and efficient..." (p. 173). Sergiovanni, (2000) posits that schools need a special kind of leadership because they are "...life world intensive..." (p. 166). By strengthening the transference of the beliefs, rituals, artifacts and norms of a school, the principal acts as its cultural leader (Weise and Holland, 1994). The innovational school leader is a "...builder of

culture..." (Sashkin & Sashkin, 1993, p. 101). It is the principal's mission to create a culture that supports teachers as "...reflective decision makers..." in the area of teacher leadership (Sergiovanni, 1994, p. 74).

By virtue of the position, principals are seen as leaders but many times the leadership that they attempt to employ is authoritarian in nature. These authoritarian leaders are characterized by tight control over behavior, curriculum and goals (Barth 1990). Sergiovanni (1994) supports this work when he states that reflection and meaningful conversation will not occur when principals dictate and teachers acquiesce; nor, when principals teach and teachers implement the principal's teachings.

According to Sergiovanni (1994), it is the principal's duty to create opportunities for teachers to offer input into school based decision-making processes. Fiore (2000) suggests principals need to understand that schools operate as communities and that they have tremendous power over the culture of that school community.

Blasé and Anderson (1995) describe the characteristics of authoritarian leadership as "...manipulation of sanctions and rewards"(p. 27). Their study showed that when teachers view the principal as

misusing power, this creates a negative effect on their willingness to be involved in work. According to Blasé and Anderson's study, relationships between teachers and principals were seriously destroyed as a result of control-oriented practices. In this atmosphere, trust and respect were negatively affected. Their data suggested that teacher empowerment might be achieved "...when the line between leadership and follower-ship becomes blurred"(p.4). Schlechty (1990) concludes that in schools, more than in other organizations, innovative leadership for both teachers and administrators is discouraged.

Principals who encourage teachers to take responsibilities beyond the classroom and see teacher's voices as being crucial are viewed as fostering teacher leadership (Gehrke & Romerdale, 1997). This view is supported by the research of Blasé and Kirby (1992). Their research showed that effective school principals understood that they alone could not provide all of the leadership needed in a school; and, principals have a true imprint upon teachers' attitudes and behaviors positively or negatively. "Teachers believe that a principal's power expands when it is shared" (p.41).

In support of the research of Gehrke and Romerdale (1997) Blasé and Kirby (1992) posit that what teachers found important was the sincerity of the principal who provided opportunities for participation in school governance and the importance placed upon teacher input in the final decision. The teachers in their study "...reported that open and effective principals encourage teacher participation in planning, choosing alternatives and achieving objectives" (p.40).

Barth (1990), supports the idea that the successful principal will view leadership as something to share with teachers within the culture of the school. He suggests that principals "...who are most successful as leaders themselves are somehow able to enlist teachers in providing leadership for the entire school" (p.134).

The results of a study by Wildy and Loudon (2000) concluded that principals, in restructuring schools, are expected to engage in sharing authority while, at the same time, providing clear leadership. Their work identified six groups of knowledge that principals need to possess: "...caring for others; strength in making decisions; fairness and consistency; being open to alternatives; involving others; and articulating long term goals" (p. 182).

Wildy and Louden's study is supported by Leithwood (1992) who's research results imply that principals who transform school culture pursue specific goals. According to Leithwood these goals are: "...helping staff members develop and maintain a collaborative professional school culture; fostering teacher development; helping teachers solve problems together more effectively" (Leithwood, 1992, p. 19).

It is the principal's responsibility to support teachers in building their leadership skills; however, the principal's need for recognition may hinder the involvement of leadership in teachers. Principals believe that they have little control in the school setting and resist relinquishing authority to teachers (Barth, 1990). In Barth's research, he states, "...the most important characteristic of effective principals is the capability to relinquish because only then can teachers' powers be released" (p. 134).

Lambert (1998) views school leadership as a "...collective learning process..." (p.12) and supports Barth (1990) in the idea that leadership needs to be shared between principal and teacher. She offers the idea that it is the principal's responsibility to build leadership capacity through broad based and skilled participation in

the school community. The principal's role becomes critical because as Lambert states "...it is more difficult to build leadership capacity in colleagues than to tell colleagues what to do" (p. 24). She goes on to assert that the principal's ability to lead is critical in establishing high leadership capacity in teachers.

Sergiovanni (2000) speaks to the issue of capacity building in that capacity increases a teacher's leadership ability and what they know and are able to accomplish in the school setting. He offers the idea that the principal needs to give teachers discretion to act, the support they need to teach, and involve them in continuous learning. In this way, a teacher's capacity to lead will increase.

Blasé and Kirby (1992) write that it is the effective principal who realizes that he or she cannot do the job alone nor provide leadership in every aspect of school life. What is important to teachers is the sincerity of the invitation on the part of the principal to participate in school leadership.

There is a small body of current research that speaks to the effects of gender, age and years with the organization on the perceptions of school culture and leadership. Grant (1996) in a dissertation study found

that there was no statistical difference in the independent variables of years with the organization and gender in perceptions of leadership and school culture. Martchink (1997) also found that years with the organization and gender of the respondents had no significant effect upon perceptions of leadership.

Teacher Leadership/Empowerment and Organizational Culture

"All teachers can lead" (Barth, 1990, p.123). "...and leadership flourishes when leaders and followers view each other as being credible" (Sergiovanni, 1994, p.200). In recent years much attention has been paid to changing the organizational culture of schools from one that encourages adversarial relationships between and within teachers and principals to a school culture of shared leadership and collegiality (Lieberman, et al., 1988). The culture of teaching on a whole is changing with site-based management aimed at increasing teacher leadership (Fullan, 1994). The idea of cultural leadership takes on the look of consensus of goals and ideas that exercises greater power than does control (Weise & Holland, 1994).

The Cooke and Lafferty model (1989), suggests that specific behavioral norms and organizational culture may be associated with potential for leadership. Their model

also suggests that certain organizational cultures would not foster the opportunity for empowerment.

They posit that Constructive Cultures, in which:

...members are encouraged to interact with others and approach tasks in ways that will help them meet their higher-order satisfaction needs are characterized by Achievement, Self-actualizing, Humanistic-Encouraging, and Affiliative behavioral norms.

They also suggest that Passive - Defensive Cultures, in which:

...members believe they must interact with people in ways that will not threaten their own security, are characterized by Approval, Conventional, Dependent, and Avoidance behavioral norms.

They further imply that Aggressive-Defensive Cultures, in which:

...members are expected to approach tasks in forceful ways to protect their status and security, are characterized by oppositional, Power, Competitive, and Perfectionist behavioral norms.

(From *Organizational Culture Inventory* by R. A. Cooke and J. C. Lafferty, 1983, 1986, 1987, 1989, Plymouth, MI: Human Synergistics, Copyright 1989 by Human Synergistics, Inc. Adapted by permission).)

The cultural styles and the 12 behavioral norms as suggested by the Cooke and Lafferty model (1989), further propose that specific behavioral norms and organizational culture may be associated with potential for empowerment. Constructive cultural norms, apparent in certain organizational environments, promote cooperation, empowerment and transformational leadership. The expectations for Constructive behavior include employee involvement at the organizational level (Szumal, 1998).

Specifically, the Constructive norms are styles promoting satisfaction behavior:

Achievement

An Achievement culture characterizes organizations that do things well and value members who set and accomplish their own goals. Members are expected to set challenging but realistic goals, establish plans to reach these goals, and pursue them with enthusiasm. (Pursuing a standard of excellence)

Self Actualizing

A Self-actualizing culture characterizes organizations that value creativity, quality over quantity, and both task accomplishment and individual growth. Members are encouraged to gain enjoyment from their work, develop themselves, and take on new and interesting activities.

(Thinking in unique and independent ways)

Humanistic-Encouraging

A Humanistic-Encouraging culture characterizes organizations that are managed in participative and person-centered ways. Members are expected to be supportive, constructive, and open to influence in their dealings with one another.

(Helping others to grow and develop)

Affiliative

An Affiliative culture characterizes organizations that place a high priority on constructive interpersonal relationships. Members are expected to be friendly, open and sensitive to the satisfaction of their work group.

(Dealing with others in a friendly way)

Cooke and Lafferty's (1989) model further suggests that Passive-Defensive norms promote being a follower, pushing decisions upward, and lack of trust in an individual's ability to make decisions. Specifically, the Passive-Defensive norms are styles promoting people-security behaviors:

Approval

An Approval culture describes organizations in which conflicts are avoided and interpersonal relationships are pleasant-at least superficially. Members feel that they should agree with, gain approval of, and be liked by others. (Going along with others)

Conventional

A Conventional culture is descriptive of organizations that are conservative, traditional, and bureaucratically controlled. Members are expected to conform, follow the rules, and make good impressions.

(Always following policies and practices)

Dependent

A Dependent culture is descriptive of organizations that are hierarchically controlled and non-participative.

Centralized decision making in such organizations leads members to do only what they are told and to clear all decisions with superiors.

(Pleasing those in positions of authority)

Avoidance

An Avoidance culture characterizes organizations that fail to reward success but nevertheless punish mistakes. This negative reward system leads members to shift responsibilities to others and avoid any possibility of being blamed for a mistake.

(Waiting for others to act first)

Cooke and Lafferty (1989) posit further that Aggressive-Defensive cultures promote disempowerment and value competition over cooperation. Specifically, the Aggressive -Defensive norms are styles promoting task-security behaviors:

Oppositional

An oppositional culture describes organizations in which confrontation and negativism are rewarded. Members gain status and influence by being critical and thus

are reinforced to oppose the ideas of others.

(Pointing out flaws)

Power

A Power culture is descriptive of non-participative organizations structured on the basis of authority inherent in members' positions. Members believe they will be rewarded for taking charge, controlling subordinates and, at the same time, being responsive to the demands of superiors.

(Building up one's power base)

Competitive

A Competitive culture is one in which winning is valued and members are rewarded for outperforming one another. Members operate in a "win-lose" framework and believe they must work against rather than with their peers to be noticed.

(Turning the job into a contest)

Perfectionistic

A Perfectionistic culture characterizes organizations in which perfectionism, persistence, and hard work are valued. Members feel they must avoid any mistake,

keep track of everything, and work long hours to attain narrowly defined objectives.

(Do things perfectly)

(From *Organizational Culture Inventory* by R. A. Cooke and J. C. Lafferty, 1983, 1986, 1987, 1989, Plymouth, MI: Human Synergistics, Copyright 1989 by Human Synergistics, Inc. Adapted by permission.)

The above research suggests that the Constructive Style strongly associates with satisfaction and low stress; the Passive-Defensive style associates with dissatisfaction and high stress; and the Aggressive-Defensive style weakly relates to specific measures of dissatisfaction and stress (Cooke and Szumal 1993).

Supporting the Cooke and Lafferty model (1989) and the implication that the Constructive style promotes empowerment, Cunningham and Gresso (1993) suggest that the culture influences opportunities for empowerment. In organizational cultures that promote self-development and intrinsic motivation, the opportunity exists for shared leadership. Effective organizational cultures encourage people to develop their talents. They also put forward the idea that the more organizational cultures deny that individuals need to be empowered; the more the

capabilities and expertise of these teachers are lost to the school.

Cranston (2000) states that teacher leadership has become critical for school improvement. He writes that as the job of the principal changes, there are gaps in school leadership that may be filled by teachers. Teachers, he notes, need to take a "...my school approach rather than a my class approach" (p. 126). He posits that the leadership demands on teachers are becoming more multifaceted and that the issue of teacher leadership is becoming critical for continuing school improvement.

Schlechty (1990) puts forth the idea that participatory leadership should be the preferred method of school governance because it will "...yield better decisions and better results" (p. 52). In the past decade of educational reform, teacher leadership became a trend and central to the issue of the transformation of schools (Urbanski & Nickolaou, 1997).

Barth (1990) views the school as a place where there is a community of leaders. However, from his research, he has uncovered feelings on the part of both teachers and principals that teaching and leadership are exclusive of each other. Sergiovanni (2000) posits that in many schools teaching is undervalued and systems for

supporting teachers do not exist or are so underdeveloped as to be non-existent.

Historically, their peers viewed teachers who moved to become leaders with skepticism. The lack of a supportive culture that would allow teacher leaders to emerge created the situation where the only job of teachers was to teach students with the classroom walls defining their sphere of influence (Urbanski & Nickolaou, 1997).

Little (1988) states that those who are proponents of teacher leadership have grossly misjudged the change this would bring. This change has influenced the principal's relationships with teachers and with the principal's role in the school. Her research showed that administrators were more receptive to teacher leadership opportunities than the teachers themselves.

Romanish's (1991) position on teacher leadership is diametrically opposed to Little's in that he asserts at this time in the development of school culture, it is the teachers who demonstrate a willingness to chart new roads in educational leadership while the principal has become the impediment to change. Lambert (1998) argues that teachers must take the position that it is their

responsibility to create leadership capacity in their schools and for school reform.

Sergiovanni (2000) posits that there are certain strategies necessary for capacity building and hence leadership in teachers. He asserts that there needs to be professional socialization and development; that teachers need to be involved in shared purposes and that the principal needs to create opportunities for increased collegiality that will foster teacher leadership.

Leadership is attractive to teachers because it offers the opportunity to improve teaching and it replaces the singular leadership position of the principal. Teachers who assume leadership roles derive energy from leadership and more completely understand the views of others (Barth, 1990). School leadership comes from the teacher who assumes responsibility "...for the well-being of the school" (Barth, 1990, p.144).

This assumption of responsibility and the ensuing empowerment according to Hoy and Sweetland (2000) may take the form of participation in decisions affecting curriculum development, personnel, student matters, and budgetary concerns. For a teacher to be able to exert leadership there needs to be a commitment on the part of the teacher to an educational ideal (Barth 1990).

The research of Gehrke and Romerdale (1997) suggests that teachers become frustrated in leadership roles when the principal suggests that there is autonomy when in reality the principal constantly monitors the teacher's actions and decisions. Barth (1990) stated that it is important to involve teachers before the decisions are made because teacher partnership in leadership fosters a communal identity. This promotes the thought of a school as a community of leaders rather than leadership residing solely with the principal. This shared leadership replaces the singular authority of the principal with a shared strength of both teacher and principal.

This shift in thought is supported by the research of Cunningham and Gresso (1993). They propose that the organizational culture of the school which supports empowerment will embody collegiality, trust, integrity and open communication. They further suggest that a culture, which fosters teacher leadership, will exhibit mutual support, personal growth, innovation, and the involvement of stakeholders along with the encouragement of staff to experiment and innovate.

CHAPTER III

Methodology

Introduction

This study will examine school culture as perceived by principals and teachers and the associated potential for teacher leadership in selected elementary schools in New Jersey.

The focus of this study is those public school districts in Monmouth County, New Jersey that contain schools with an elementary configuration in the District Factor Groups of CD-DE-FG-GH. These particular DFG's were chosen in an attempt to eliminate extremes of wealth or poverty, educational level, occupational status, population, income, and unemployment that might be found in higher or lower socioeconomic districts.

Monmouth County was chosen as the location for the research, as it is representative of the state. Both the county and the state showed an increase in population from 1990 to 2000 with the state increase at 8.6% and Monmouth county at 11.2%. Twenty-six percent of the

county's population was reported to be under 18 which is comparable to the state percentage of 24.8%. The county median household income of \$57,985 based upon 1997 estimates was higher than the state median income of \$47,903. When the actual districts that were part of the study were examined for the median household income, the gap between the two becomes less with the study districts' median household income at \$44,509 (United States Census Bureau, 2001, <http://quickfacts.census.gov>).

Racially, Monmouth County was comparable to the state with 84.4% of the population self-reporting white in the 2000 census with the state self-reporting 72.6% white. In the 2000 census Monmouth County had 1303.6 persons per square mile comparable to the state average of 1134.5 persons per square mile (United States Census Bureau, 2001, <http://quickfacts.census.gov>). Like Monmouth County, 100% of the state is considered to be within a metropolitan area. Within this metropolitan area, there are areas of both the state and Monmouth County that are considered rural (United States Census Bureau, 2001, <http://homer.ssd.census.gov>).

As with the State of New Jersey, Monmouth County contains school districts designated special needs districts. The range of District Factor Groups in

Monmouth County covers seven of the designation, except for J districts. There are elementary districts, high school districts, and K-12 districts, which are representative of the state as a whole. The percentage of high school graduates, persons 25 years and over, in 1990 was 49.9% for the county, compares with the state percentage of 47.1% (New Jersey Department of Education website, 2001, <http://www.state.nj.us/education/>).

Research Design

This study took the form of non-experimental quantitative research. This was used to study the organizational culture of elementary schools and the associated potential for teacher leadership. The researcher employed a survey to measure the organizational culture of a school at a specific time and to look at data beyond the scope of what may be observed firsthand (Leedy, 1997). Babbie (1999) states that survey research is most likely the best method available, to the researcher who is interested in collecting data, to describe a population too large to observe first hand.

Instrument

The instrument used in this study was the Organizational Culture Inventory® Human Synergistics International. The tool was originally developed to measure the behavioral norms of organizations operating in North America. The survey was also designed to identify organizational cultures and the results were used for development and change in organizations (Cooke and Szumal, 1993). The inventory has been used for research into the organizational cultures of: "...government agencies, business firms, health care organizations, and educational systems... (Cooke & Szumal, 1993,p. 1301)

The Organizational Culture Inventory® Human Synergistics International consists of 120 items that describe behaviors and personal styles that organizations might expect or require of their members. It is a self-reporting paper pencil instrument designed to assess twelve sets of normative beliefs and shared behavioral expectations delineated by two core dimensions. The first dimension addresses a concern for task as opposed to a concern for people; and, the second dimension addresses higher order personal fulfillment as opposed to security needs (Cooke & Szumal, 1993).

The twelve normative constructs and shared behavioral expectations are arranged around a circumplex (Appendix A, Figure 1). The circumplex is a circular order of style with those styles that are related closest on the circle and those styles that are divergent farthest apart. The styles that are on the left side demonstrate task orientation while those on the right demonstrate concern for people. The styles that are on the top reflect a concern for higher order satisfactions needs while those on the bottom reflect a need for security (Cooke & Szumal, 1993).

The responses to these twelve behavioral norms may then be plotted on a normed profile and all of the responses from an organization may be averaged to obtain an organizational profile. The data can then be examined as to where it falls on the circumplex (Cooke and Szumal 1993).

Cooke & Szumal (1993), in their review of the Organizational Culture Inventory®, report that the OCI is a reliable and valid tool for assessing organizational culture. The twelve scales, as reported, demonstrate internal consistency and test-retest reliability. "The inter-rater reliability of the 12 scales is fairly high across the three forms of the inventory" (p. 1309). They

further report that, in relation to criterion-related validity, "The results based on the self-reported criteria of normative stress, and satisfaction are supportive of the criterion-related validity of the inventory's scales as all significant correlation coefficients are in the expected direction" (p.1316).

The analysis of their data also shows that cross-section samples indicate:

...organizational membership explains a significant amount of the variance in individual responses to the inventory. These results provide support for the inter-rater reliability of the inventory which along with test retest reliability, is critical for an instrument designed to measure behavioral norms and expectations that are, by definition, shared and enduring.

(Cooke & Szumal, 1993, p. 1320)

Cooke and Szumal (1993) also state that the inventory measures what it purports to measure and that it is valid in regards to group and individual criteria. As cited in Cooke and Szumal (1993), Broadfoot and Ashkanasy (1994) as well as Cooke and Rousseau (1988), support the findings of the report by Cooke and Szumal (1993) related

to the statistical reliability and validity of the Organizational Culture Inventory® Human Synergistics International as do Draper and Associates (1989) and Xenikou and Furnham (1996).

The researcher in this study ran Cronbach Alpha Coefficients for construct reliability on the data collected from the population of teachers and principals who participated in the research. Ten of the twelve alphas were in the very good range and two were in the good range (Table 2).

The above research suggests that the Constructive Style strongly associates with satisfaction and low stress; the Passive-Defensive style associates with dissatisfaction and high stress; and the Aggressive-Defensive style weakly relates to specific measures of dissatisfaction and stress (Cooke & Szumal 1993).

Collection of data

The subjects of this study are the superintendent/principals, principals, and teachers in ten public school districts that encompass 23 elementary schools in Monmouth County in the State of New Jersey within the district factor groups of CD-DE-FG-GH. The

Superintendents or Superintendent/ Principals of each of the selected districts were initially contacted via a letter (Appendix B). The letter explained who the researcher was, the purpose of the study, and requested permission to survey teachers and the principal(s) in the district. The letter described the survey to be used and enclosed a copy of the survey.

In the letter, assurances were given for the anonymity of the district and all participants. Subsequent to the letter, a personal meeting was arranged with those superintendents who requested such a meeting. With permission of the Superintendent, and upon receipt of a letter of permission to participate, the Organizational Culture Inventory® Human Synergistics International was distributed to the principal and full time teaching staff within the 23 schools.

A letter accompanied the inventory introducing the researcher and explaining the purpose of the study. The letter assured each teacher (Appendix C) and principal (Appendix D) that they would remain anonymous and confidentiality would be maintained. The letter further assured that the participants maintained the right not to participate and to withdraw from the study at any time without prejudice.

The principals and teachers were asked to return the Organizational Culture Inventory® Human Synergistics International, sealed, in a stamped envelope provided, to the researcher's post office box. A follow-up post card mailing was done to obtain further returns of the survey.

Subjects

The subjects included in this study were full-time teachers, principals, and superintendent/principals selected from 23 elementary schools in Monmouth County, New Jersey. The focus of this study was the culture of the school and the associated potential for leadership for teachers in the selected elementary schools. Therefore, the ten districts selected were those districts that contained elementary schools.

The District Factor Group of these districts were designated CD-DE-FG-GH which fall in the middle of the district factor group indicators with the groups ranked from (lowest) A, B, CD, DE, FG, GH, I, to J (highest). These particular DFG's were chosen in an attempt to eliminate extremes of: wealth or poverty, educational level, occupational status, population, income, and unemployment that might be found in higher or lower socioeconomic districts.

Data Analysis

The twelve cultural styles measured by the Organizational Culture Inventory® Human Synergistics International (Cooke & Lafferty, 1989) are used to determine the overall organizational culture of the school and the associated potential for teacher leadership. The rate of return for the surveys is 169 teacher respondents out of 672 polled for a percentage of 25.4 % and 15 administrator respondents out of 30 polled with two administrator surveys discarded for improper indicators of responses for a percentage of 43.3%.

The raw data collected via the OCI are analyzed using descriptive and inferential statistics. Demographic data are also provided. "The historically older area , descriptive statistics, supplies a number of tools such as tables, graphs, and averages for organizing and summarizing information about a collection of actual observations" (Witte & Witte, 1997, p. 3). Inferential statistics is "The body of statistical computations relevant to making inferences from findings based on sample observations to some larger populations" (Babbie, 1999, p. 455). The statistics were run using SPSS® 10 for Windows®. (SPSS® 10 is a registered trademark of SPSS, Inc. and Windows® is a trademark of Microsoft, Inc.).

Sub problem one; What effect does gender have upon principals' and teachers' perception of school culture and the associated potential for teacher leadership? In the analysis of the effect of gender the data will be analyzed using the t-test for two independent samples to compare the means of the two distributions of perception of school culture as in this case there was no overlap of group membership.

Sub problem two; What effect does educational level have upon principals' and teachers' perception of school culture and the associated potential for teacher leadership? The data for sub problem two, level of education, will be analyzed using the t-test for two independent samples to compare the means of the two distributions of perception of school culture and the associated potential for teacher leadership as in this case there was no overlap of group membership. The data is divided into those respondents whose educational level fell below a Masters Degree and those respondents who held a Masters Degree and above.

The method for analysis of the data for sub problems three, four and five is the Analysis of Variance referred to as ANOVA. "This type of analysis tests whether differences exist among population means categorized by

only one factor or independent variable..." (Witte & Witte, 1997, p. 346). In the instances where the null hypothesis is rejected a post hoc multiple comparison test is run. This test is calculated to determine if the significant F ratio is due to differences between the paired means or due to more a complex combination of means. The post hoc test employed on the data in this research is the Tukey method, which, is referred to as HSD (honestly significant difference) test (Hinkle, Wiersma & Jurs, 1998).

Sub problem three; What effect does age have upon principals' and teachers' perception of school culture and the associated potential for teacher leadership? In sub problem three, the independent variable is age and the dependent variable is outcome upon principals' and teachers' perception of school culture and the associated potential for teacher leadership. The means of eight ranges of age are examined using the ANOVA test to study the differences between the means. The Tukey post hoc HSD test is employed to further test the statistical significance of the data.

Sub problem four; What effect do years with the school district have upon principals' and teachers' perception of school culture and the associated potential

for teacher leadership? In sub problem four, the independent variable is years with the school and the dependent variable is the outcome upon principals' and teachers' perception of school culture and the associated potential for teacher leadership. The means of eight ranges of years with the organization are examined using the ANOVA test to study the differences between the means. The Tukey post hoc HSD test is employed to further test the statistical significance of the data.

Sub problem five; What effect does a school district's District Factor Grouping have upon principals' and teachers' perception of school culture and the associated potential for teacher leadership? The independent variable in sub problem five is the school district's District Factor Grouping and the dependent variable is the effect upon principals' and teachers' perception of school culture and the associated potential for teacher leadership. The means of four DFG's are examined using the ANOVA test to study the differences between the means of the DFG's. The Tukey post hoc HSD test is employed to further test the statistical significance of the data.

Sub problem six; Is there a statistically significant difference in the perceptions of principals

and teachers as to the organizational culture of schools? The data for this problem was run using an independent samples t-test. George and Mallery, (2001) state that "The t-test is a procedure used for comparing two sample means to see if there is sufficient evidence to infer that the means of the corresponding population distribution also differ (p.361)". In this analysis, the t- test for two independent samples is run to compare the means of two distributions of perception of school culture as there was no overlap of group membership.

The statistical significance of this study is set at the .05 threshold. Statistical results between .051 and .100 are considered trends by the researcher.

CHAPTER IV

Analysis of Data

Introduction

The purpose of this study was to examine the organizational culture of schools and the associated potential for teacher leadership as perceived by teachers and principals in selected elementary schools in New Jersey. Data from the Organizational Culture Inventory® Human Synergistics International (Cooke & Lafferty, 1983, 1986, 1987, 1989) was collected and analyzed for the teachers and principals who participated. A total of 182 surveys were returned that included 169 teachers and 13 administrators from 23 elementary schools within Monmouth County, New Jersey. Based on responses to the 120 individual questions, the raw data was divided into 12 constructs and SPSS® 10.0 was run to provide both descriptive and inferential statistics.

Descriptive Data

Demographics of Principals

In the sample of principals who participated in this study (N=13) (Table 3) the valid percent for age included 7.7% from 30-39; 15.4% from 40-49; 69.2% from 50-59 and 7.7% over the age of 60. In this sample 76.9% of the principals ranged from 50 to 60+. In regard to years with the school (Table 3) the valid percent of principals who were with the system for 10 years or more was 61.6 % with a range of 7.7% over one year to 46.2% 15 years or more.

This study included schools in the district factor groups of CD, DE, FG, and GH. Seventy-six point nine percent (Table 3) of the responses came from principals in the two middle DFG's of DE and FG with a range of 7.7% in the C DFG to 15.4% in the GH DFG . The level of education achieved by principals was divided into Masters level and Doctorate (Table 3). In this study 77.0% of the principals were at the Masters level while 23.0% held doctorates. The principals who responded to this study were split at 53.8% males and 46.2% females (Table 3).

Table 3

Summary of Principal Sample Composition

		Frequency	Valid %
Age			
	30-39	1	7.7
	40-49	2	15.4
Valid	50-59	9	69.2
	60+	1	7.7
	Total	13	100.0
Years with School			
	1-2	1	7.7
	2-4	1	7.7
Valid	4-6	2	15.4
	6-10	1	7.7
	10-15	2	15.4
	15+	6	46.2
	Total	13	100.0
District Factor Group			
	CD	1	7.7
Valid	DE	3	23.1
	FG	7	53.8
	GH	2	15.4
	Total	13	100.0
Education			
	Masters	10	77.0
Valid	Doctorate	3	23.0
Gender			
	Females	6	46.2
Valid	Males	7	53.8
	Total	13	100.0

Demographics of Teachers

In the sample of teachers (N=169) (Table 4) the valid percent for age included 13.3% from age 20-29; 18.2% from 30-39; 27.9% from 40-49; 36.4% from 50-59 and 4.2% over the age of 60. In this sample 64.3% of the teachers ranged from 40-59. In regard to years with the school (Table 4) the valid percent of teachers who were with the system for 10 years or more was 58.9 % with a range of 3.4% less than six months to 32.6% 15 years or more .

This study included schools in the district factor groups of CD, DE, FG, and GH (Table 4). Eight-four point six percent of the responses came from teachers in the two middle DFG's of DE and FG with a range of 2.4 % in the C DFG to 13.0% in the GH DFG. The level of education achieved by teachers was divided into below and above Masters level (Table 4). In this study 59.4% of the teachers did not hold Master's Degrees while 40.6% of the teachers were at the Masters or above level. The teachers who responded to this study were predominately female at 87.6% as opposed to males at 12.4% (Table 4).

Table 4

Summary of Teacher Sample Composition

		Frequency	Valid %
Age			
	20-29	22	13.3
	30-39	30	18.2
Valid	40-49	46	27.9
	50-59	60	36.4
	60+	7	4.2
	Total	165	100.0
Missing System		4	
Total		169	
Years with School			
	>6	6	3.4
	6>1	9	5.1
	1-2	8	5.1
Valid	2-4	13	7.7
	4-6	11	7.1
	6-10	20	11.5
	10-15	44	26.3
	15+	51	32.6
	Total	162	100.0
Missing System		7	
Total		169	
District Factor Group			
	CD	4	2.4
Valid	DE	56	33.1
	FG	87	51.5
	GH	22	13.0
	Total	169	100.0
Education			
	>Masters	98	59.4
Valid	Masters +	67	40.6
	Total	165	100.0
Missing System		4	
Total		169	
Gender			
	Females	148	87.6
Valid	Males	21	12.4
	Total	169	100.0

Organizational Culture Inventory® Overview

The responses to the Organizational Culture Inventory® Human Synergistics International were compiled and formulated into twelve constructs based on the OCI Circumplex ©. The 12 constructs are combined into three cultural styles; Constructive (Achievement, Self-Actualizing, Humanistic-Encouraging, Affiliative), Passive/Defensive (Approval, Conventional, Dependent, Avoidance), and Aggressive/Defensive (Oppositional, Power, Competitive, Perfectionistic) (From *Organizational Culture Inventory* by R. A. Cooke and J. C. Lafferty, 1983, 1986, 1987, 1989, Plymouth, MI: Human Synergistics, Copyright 1989 by Human Synergistics, Inc.). The inventory is a Likert type scale response form with respondents indicating the extent to which a statement applies to the culture of an organization at the specific time and ranges from (1) not at all; (2) to a slight extent; (3) to a moderate extent; (4) to a great extent, and (5) to a very great extent.

OCI Data - Principals

The raw data from the survey were inputted in the SPSS® 10 Program and a table summary of responses of valid percents, mean scores, standard deviation, construct totals and range for each of the constructs was created. The data for principals were also described in the narrative that follows.

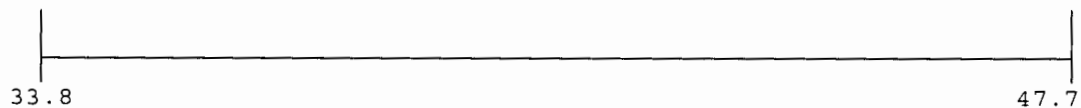
Within the Constructive Style, in the Achievement construct the principals' mean scores ranged from 33.8 to 47.7 with a mean construct total of 41.23 and a SD of 5.15 (Table 5). This indicated to a great extent the principals believed, the culture of the school supported an achievement model. In the Self-Actualizing construct (Table 6), the principals reported a range of mean scores from 23.8 to 48.5. The total mean score of 38.77, SD 5.82, fell into the high moderate range of the principals surveyed.

Also in the Constructive style, the principals indicated that the range of mean scores for the Humanistic-Encouraging construct (Table 7) varied from 39.2 to 45.4 with a construct total mean of 42.38 and a SD of 6.21. This mean represented scores in the range of to a great extent of the principals who participated in

Table 5

Summary of Principals' Responses for the AchievementConstruct

Question	1(0) Not at all	<u>Valid</u> 2(0) To a slight extent	<u>Mean</u> 3(0) To a moderate extent	<u>Percent</u>		Mean(0)	SD
				4(0) To a great extent	5(0) To a very great extent		
q11	0.0	0.0	7.7	53.8	38.5	4.31	.63
q26	0.0	7.7	23.1	38.5	30.8	3.92	.95
q27	0.0	15.4	7.7	53.8	23.1	3.85	.99
q41	7.7	0.0	38.5	53.8	0.0	3.38	.87
q42	0.0	0.0	0.0	38.5	61.5	4.62	.51
q43	0.0	0.0	0.0	61.5	38.5	4.38	.51
q56	0.0	0.0	7.7	38.5	53.8	4.46	.66
q57	0.0	7.7	46.2	38.5	7.7	3.46	.78
q58	0.0	7.7	15.4	38.5	38.5	4.08	.95
q59	0.0	0.0	7.7	7.7	84.6	4.77	.60
Construct						41.23	5.15
TOTAL							



RANGE OF RESPONSE MEANS

Table 6

Summary of Principals' Responses for the
Self-Actualizing Construct

Question	<u>Valid</u>		<u>Mean</u>	<u>Percent</u>		Mean (0)	SD
	1 (0) Not at all	2 (0) To a slight extent	3 (0) To a moderate extent	4 (0) To a great extent	5 (0) To a very great extent		
q75	7.7	0.0	23.1	38.5	30.8	3.85	1.14
q89	0.0	7.7	30.8	38.5	23.1	3.77	.93
q90	15.4	46.2	23.1	15.4	0.0	2.38	.96
q103	7.7	15.4	53.8	15.4	7.7	3.00	1.00
q104	0.0	0.0	7.7	46.2	46.2	4.38	.65
q105	0.0	0.0	15.4	38.5	46.2	4.31	.75
q117	0.0	15.4	23.1	53.8	7.7	3.54	.88
q118	0.0	0.0	23.1	7.7	69.2	4.46	.88
q119	0.0	7.7	15.4	23.1	53.8	4.23	1.01
q120	0.0	0.0	0.0	15.4	84.6	4.85	.38
Construct TOTAL						38.77	5.82



RANGE OF RESPONSE MEANS

Table 7

Summary of Principals' Responses for the Humanistic-
Encouraging Construct

Question	Valid		Mean	Percent		Mean (0)	SD
	1 (0) Not at all	2 (0) To a slight extent	3 (0) To a moderate extent	4 (0) To a great extent	5 (0) To a very great extent		
q2	0.0	0.0	0.0	46.2	53.8	4.54	.52
q3	0.0	0.0	23.1	53.8	23.1	4.00	.71
q4	0.0	7.7	7.7	23.1	61.5	4.38	.96
q5	0.0	0.0	0.0	46.2	53.8	4.54	.52
q18	0.0	7.7	7.7	53.8	30.8	4.08	.86
q19	0.0	7.7	15.4	23.1	53.8	4.23	1.01
q20	0.0	0.0	38.5	15.4	46.2	4.08	.95
q34	0.0	0.0	15.4	46.2	38.5	4.23	.73
q35	0.0	0.0	0.0	61.5	38.5	4.38	.51
q50	0.0	7.7	7.7	69.2	15.4	3.92	.76
Construct TOTAL						42.38	6.21



RANGE OF RESPONSE MEANS

the study indicated that the culture of the school supported a Humanistic-Encouraging model. The range of means in the Affiliative construct (Table 8) part of the Constructive Style, varied from 38.5 to 48.5 with a construct total mean of 44.0, SD 4.55. This total mean of 44.0 indicated that the principals' responses fell into the range of to a great extent.

Within the Passive/Defensive Style, the principals indicated that the range of mean scores for the Approval construct (Table 9) varied from 17.7 to 30.8 with a construct total mean of 24.85, SD 6.18. This total mean indicated a score represented in the range of to a slight extent. In the Conventional construct the principals' mean scores ranged from 13.8 to 42.3 with a mean construct total of 26.77 and SD of 5.90 (Table 10). This range indicated that to a slight extent the conventional model represented the principals' perception of the culture of the school.

Also in the Passive/Defensive style, the Dependent construct (Table 11), the principals reported a range of mean scores from 19.2 to 36.2. The total mean score of 27.54, SD 5.03, represented principals' responses in the to a slight extent range. The range of means in the Avoidance construct (Table 12), part of the

Table 8

Summary of Principals' Responses for the Affiliative
Construct

Question	<u>Valid</u>					Mean (0)	SD
	1(0) Not at all	2(0) To a slight extent	3(0) To a moderate extent	4(0) To a great extent	5(0) To a very great extent		
q61	0.0	0.0	0.0	46.2	53.8	4.54	.52
q62	0.0	0.0	0.0	15.4	84.6	4.85	.38
q63	7.7	0.0	7.7	46.2	38.5	4.15	.90
q64	0.0	0.0	7.7	15.4	76.9	4.69	.63
q76	0.0	0.0	0.0	38.5	61.5	4.62	.51
q77	0.0	0.0	7.7	23.1	69.2	4.62	.65
q78	0.0	7.7	23.1	46.2	23.1	3.85	.90
q91	0.0	0.0	23.1	53.8	23.1	4.00	.71
q92	0.0	0.0	15.4	30.8	53.8	4.38	.77
q106	0.0	0.0	23.1	23.1	53.8	4.31	.85
Construct TOTAL						44.00	4.55

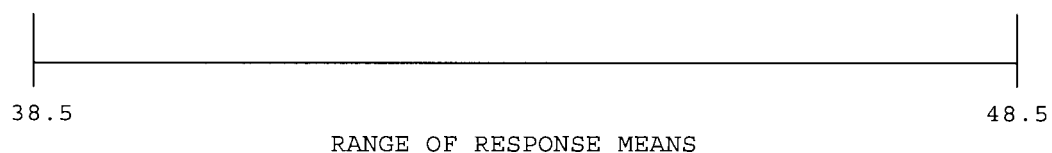


Table 9

Summary of Principals' Responses for the ApprovalConstruct

Question	<u>Valid</u>		<u>Mean</u>		<u>Percent</u>		Mean(0)	SD
	1(0) Not at all	2(0) To a slight extent	3(0) To a moderate extent	4(0) To a great extent	5(0) To a very great extent			
q6	0.0	15.4	61.5	23.1	0.0	3.08	.64	
q7	0.0	7.7	84.6	7.7	0.0	3.00	.41	
q8	15.4	30.8	38.5	15.4	0.0	2.54	.97	
q9	7.7	38.5	38.5	15.4	0.0	2.62	.87	
q21	53.8	15.4	30.8	0.0	0.0	1.77	.93	
q22	46.2	23.1	30.8	0.0	0.0	1.85	.90	
q23	23.1	23.1	53.8	0.0	0.0	2.31	.85	
q36	7.7	30.8	38.5	23.1	0.0	2.77	.93	
q37	38.5	7.7	46.2	0.0	7.7	2.31	1.25	
q51	15.4	15.4	61.5	7.7	0.0	2.62	.87	
Construct TOTAL						24.85	6.18	



RANGE OF RESPONSE MEANS

Table 10

Summary of Principals' Responses for the Conventional
Construct

Question	1(0)	<u>Valid</u>	<u>Mean</u>	<u>Percent</u>	5(0)	Mean(0)	SD
	Not at all	<u>2(0)</u> To a slight extent	<u>3(0)</u> To a moderate extent	<u>4(0)</u> To a <u>great</u> <u>extent</u>			
q67	30.8	30.8	23.1	15.4	0.0	2.23	1.09
q68	15.4	15.4	46.2	23.1	0.0	2.77	1.01
q69	0.0	0.0	7.7	61.5	30.8	4.23	.60
q70	0.0	30.8	46.2	15.4	7.7	3.00	.91
q83	15.4	38.5	30.8	15.4	0.0	2.46	.97
q84	69.2	23.1	7.7	0.0	0.0	1.38	.65
q85	46.2	38.5	7.7	0.0	7.7	1.85	1.14
q99	0.0	0.0	30.8	53.8	15.4	3.85	.69
q100	23.1	46.2	23.1	7.7	0.0	2.15	.90
q115	0.0	38.5	46.2	7.7	7.7	2.85	.90
Construct TOTAL						26.77	5.90



RANGE OF RESPONSE MEANS

Table 11

Summary of Principals' Responses for the Dependent
Construct

Question	1(0)	Valid	Mean	Percent	5(0)	Mean(0)	SD
	Not at all	2(0) To a slight extent	3(0) To a moderate extent	4(0) To a great extent			
q12	46.2	23.1	23.1	7.7	0.0	1.92	1.04
q13	23.1	23.1	30.8	23.1	0.0	2.54	1.13
q14	38.5	23.1	38.5	0.0	0.0	2.00	.91
q15	0.0	7.7	38.5	38.5	15.4	3.62	.87
q28	7.7	38.5	30.8	23.1	0.0	2.69	.95
q29	0.0	38.5	46.2	15.4	0.0	2.77	.73
q30	7.7	23.1	38.5	30.8	0.0	2.92	.95
q44	38.5	15.4	38.5	7.7	0.0	2.15	1.07
q45	0.0	15.4	30.8	30.8	23.1	3.62	1.04
q60	0.0	23.1	30.8	38.5	7.7	3.31	.95
Construct TOTAL						27.54	5.03



RANGE OF RESPONSE MEANS

Table 12

Summary of Principals' Responses for the Avoidance
Construct

Question	<u>Valid</u>		<u>Mean</u>	<u>Percent</u>		Mean (0)	SD
	1(0) Not at all	2(0) To a slight extent	3(0) To a moderate extent	4(0) To a great extent	5(0) To a very great extent		
q71	69.2	15.4	7.7	7.7	0.0	1.54	.97
q72	53.8	38.5	0.0	7.7	0.0	1.62	.87
q73	46.2	30.8	7.7	15.4	0.0	1.92	1.12
q74	46.2	30.8	23.1	0.0	0.0	1.77	.83
q86	69.2	23.1	7.7	0.0	0.0	1.38	.65
q87	61.5	23.1	7.7	7.7	0.0	1.62	.96
q88	61.5	7.7	0.0	30.8	0.0	2.00	1.04
q101	69.2	15.4	15.4	0.0	0.0	1.46	.78
q102	69.2	15.4	7.7	7.7	0.0	1.54	.97
q116	23.1	46.2	23.1	7.7	0.0	2.15	.90
Construct TOTAL						17.00	6.77



RANGE OF RESPONSE MEANS

Passive/Defensive Style, varied from 14.6 to 21.5 with a construct total mean of 17.0, SD 6.77 which fell into the not representative of the culture at all for the scores obtained.

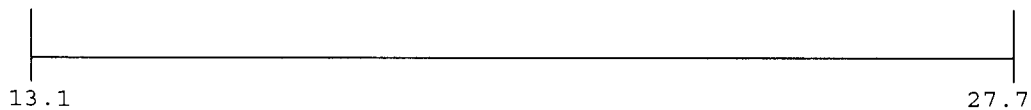
Within the Passive/Aggressive Style, in the Oppositional construct, principals' mean scores ranged from 13.1 to 27.7 with a mean construct total of 18.69, SD 4.40 (Table 13). This indicated that the principals' total mean score represented the range of not at all at the time of the survey. In the Power construct (Table 14), the principals reported a range of mean scores from 18.5 to 31.5. The total mean score of 24.77, SD 4.99 represented to a slight extent, the principals responses at the time of the survey.

In the Passive/Aggressive style, the principals indicated that the range of mean scores for the Competitive construct (Table 15) varied from 12.3 to 30.0 with a construct total mean of 18.38. The indicated range of scores for the principals was in the not at all category at the time of the survey. The range of means in the Perfectionistic construct (Table 16), part of the Passive/Aggressive Style, varied from 21.5 to 43.8 with a construct total mean of 31.38, SD 6.85. The indicated

Table 13

Summary of Principals' Responses for the Oppositional Construct

Question	<u>Valid</u>		<u>Mean</u>	<u>Percent</u>		Mean (0)	SD
	1 (0) Not at all	2 (0) To a slight extent	3 (0) To a moderate extent	4 (0) To a great extent	5 (0) To a very great extent		
q1	38.5	23.1	38.5	0.0	0.0	2.00	.91
q16	0.0	61.5	15.4	15.4	0.0	2.69	1.03
q17	46.2	30.8	23.1	0.0	0.0	1.77	.83
q31	69.2	7.7	23.1	0.0	0.0	1.54	.88
q32	30.8	46.2	23.1	0.0	0.0	1.92	.76
q33	53.8	23.1	15.4	7.7	0.0	1.77	1.01
q46	0.0	38.5	46.2	15.4	0.0	2.77	.73
q47	61.5	23.1	15.4	0.0	0.0	1.54	.78
q48	69.2	23.1	7.7	0.0	0.0	1.38	.65
q49	69.2	30.8	0.0	0.0	0.0	1.31	.48
Construct TOTAL						18.69	4.40



RANGE OF RESPONSE MEANS

Table 14

Summary of Principals' Responses for the PowerConstruct

Question	<u>Valid</u>		<u>Mean</u>		<u>Percent</u>		Mean (0)	SD
	1(0) Not at all	2(0) To a slight extent	3(0) To a moderate extent	4(0) To a great extent	5(0) To a very great extent			
q65	7.7	38.5	38.5	15.4	0.0	2.62	.87	
q79	0.0	23.1	38.5	38.5	0.0	3.15	.80	
q80	0.0	46.2	23.1	23.1	7.7	2.92	1.04	
q93	15.4	46.2	23.1	15.4	0.0	2.38	.96	
q94	30.8	23.1	23.1	23.1	0.0	2.38	1.19	
q95	46.2	15.4	30.8	7.7	0.0	2.00	1.08	
q107	0.0	46.2	30.8	15.4	7.7	2.85	.99	
q108	38.5	38.5	2.31	0.0	0.0	1.85	.80	
q109	0.0	69.2	23.1	7.7	0.0	2.38	.65	
q110	30.8	30.8	30.8	0.0	7.7	2.23	1.17	
Construct TOTAL						24.77	6.38	

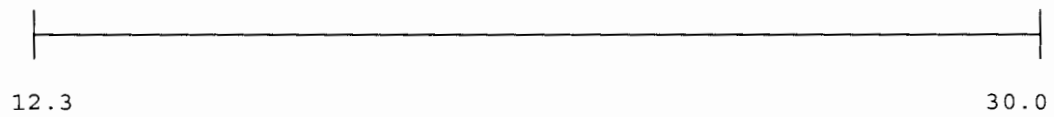


RANGE OF RESPONSE MEANS

Table 15

Summary of Principals' Responses for the Competitive
Construct

Question	<u>Valid</u>		<u>Mean</u>	<u>Percent</u>		Mean(0)	SD
	1(0) Not at all	2(0) To a slight extent	3(0) To a moderate extent	4(0) To a great extent	5(0) To a very great extent		
q10	69.2	30.8	0.0	0.0	0.0	1.31	.48
q24	23.1	23.1	23.1	30.8	0.0	2.62	1.19
q25	15.4	30.8	23.1	30.8	0.0	2.69	1.11
q38	69.2	23.1	7.7	0.0	0.0	1.38	.65
q39	61.5	30.8	7.7	0.0	0.0	1.46	.66
q40	61.5	23.1	7.7	7.7	0.0	1.62	.96
q52	53.8	38.5	7.7	0.0	0.0	1.54	.66
q53	23.1	7.7	30.8	23.1	15.4	3.00	1.41
q54	61.5	23.1	15.4	0.0	0.0	1.54	.78
q55	76.9	23.1	0.0	0.0	0.0	1.23	.44
Construct TOTAL						18.38	4.99



RANGE OF RESPONSE MEANS

Table 16

Summary of Principals' Responses for the Perfectionistic Construct

Question	<u>Valid</u>		<u>Mean</u>	<u>Percent</u>		Mean(0)	SD
	1(0) Not at all	2(0) To a slight extent	3(0) To a moderate extent	4(0) To a great extent	5(0) To a very great extent		
q66	0.0	38.5	38.5	23.1	0.0	2.85	.80
q81	0.0	15.4	15.4	46.2	23.1	3.77	1.01
q82	46.2	23.1	7.7	15.4	7.7	2.15	1.41
q96	23.1	53.8	7.7	15.4	0.0	2.15	.99
q97	23.1	38.5	7.7	23.1	7.7	2.54	1.33
q98	0.0	7.7	23.1	46.2	23.1	3.85	.90
q111	15.4	7.7	30.8	38.5	7.7	3.15	1.21
q112	23.1	38.5	15.4	15.4	7.7	2.46	1.27
q113	0.0	0.0	15.4	61.5	23.1	4.08	.64
q114	0.0	0.0	15.4	30.8	53.8	4.38	.77
Construct						31.38	6.85
TOTAL							



RANGE OF RESPONSE MEAN

range of scores for the principals was in the to a moderate extent category at the time of the survey.

OCI Data - Teachers

As with the principals' responses, the raw data for the teachers were inputted in the SPSS 10® Program and a table summary of responses of valid percents, mean scores, standard deviation, construct totals and range for each of the constructs was created. The data for teachers are described in the narrative that follows.

In the Constructive Style, the Achievement construct teachers' mean scores ranged from 29.8 to 44.3 with a mean construct total of 38.01, SD 5.90 (Table 17). The total mean score fell into the high moderate range of the teachers surveyed. In the Self-actualizing construct (Table 18), the teachers reported a range of mean scores from 21.4 to 41.2. The total mean score of 41.2, SD 6.86, fell into the range of to a great extent that the Self-Actualizing construct was representative of the culture in the school for the teachers in the study.

Also in the Constructive style, the teachers indicated that the range of mean scores for the Humanistic-encouraging construct (Table 19) varied from

Table 17

Summary of Teachers' Responses for the AchievementConstruct

Question	1(0)	<u>Valid</u>	<u>Mean</u>	<u>Percent</u>	5(0)	Mean(0)	SD
	Not at all	2(0) To a slight extent	3(0) To a moderate extent	4(0) To a great extent			
q11	2.4	4.7	20.1	50.3	22.5	3.86	.90
q26	5.3	13.0	38.5	36.1	7.1	3.27	.96
q27	1.8	9.5	34.3	37.9	16.6	3.58	.94
q41	9.0	17.4	45.5	22.8	5.4	2.98	.99
q42	1.8	3.0	10.1	42.9	42.3	4.21	.87
q43	.6	5.4	16.1	43.5	34.5	4.06	.88
q56	1.2	1.2	13.0	34.4	53.3	4.34	.84
q57	3.0	14.4	44.3	25.7	12.6	3.31	.97
q58	1.2	1.8	16.8	38.9	41.3	4.17	.86
q59	0.0	.6	13.7	28.0	57.7	4.43	.75
Construct						38.01	5.90
TOTAL							

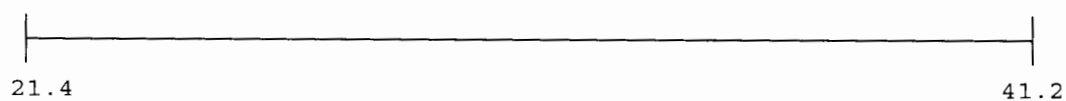


RANGE OF RESPONSE MEANS

Table 18

Summary of Teachers' Responses for the
Self-Actualizing Construct

Question	<u>Valid</u>					Mean(0)	SD
	1(0) Not at all	2(0) To a slight extent	3(0) To a moderate extent	4(0) To a great extent	5(0) To a very great extent		
q75	8.9	6.5	27.4	36.3	20.8	3.54	1.16
q89	7.1	8.9	29.0	38.5	16.6	3.49	1.09
q90	29.2	35.7	29.2	4.2	1.8	2.14	.95
q103	7.2	24.6	41.3	19.8	7.2	2.95	1.01
q104	1.8	3.6	19.0	40.5	35.1	4.04	.92
q105	1.2	3.6	18.0	43.1	34.1	4.05	.88
q117	7.8	29.9	32.9	20.4	9.0	2.93	1.08
q118	2.4	3.6	25.7	32.9	35.3	3.95	.99
q119	4.8	8.4	25.7	36.5	24.6	3.68	1.08
q120	1.8	3.6	17.4	35.3	41.9	4.12	.94
Construct TOTAL						34.56	6.86



RANGE OF RESPONSE MEANS

Table 19

Summary of Teachers' Responses for the Humanistic-
Encouraging Construct

Question	<u>Valid</u>					Mean(0)	SD
	1(0) Not at all	2(0) To a slight extent	3(0) To a moderate extent	4(0) To a great extent	5(0) To a very great extent		
q2	0.0	2.4	20.7	44.4	32.5	4.07	.79
q3	4.7	15.4	29.6	33.7	16.6	3.42	1.08
q4	1.2	4.7	15.4	44.4	34.3	4.06	.89
q5	0.0	4.7	11.2	43.2	40.8	4.20	.82
q18	1.8	8.3	20.1	34.9	34.9	3.93	1.02
q19	.6	4.1	16.6	47.3	31.4	4.05	.84
q20	8.3	10.7	25.4	29.6	26.0	3.54	1.22
q34	3.0	4.8	16.7	43.5	32.1	3.97	.98
q35	.6	7.1	13.7	39.9	38.7	4.09	.93
q50	8.3	17.3	32.7	28.6	13.1	3.21	1.13
Construct Total						38.47	6.84



RANGE OF RESPONSE MEANS

32.1 to 42.0 with a construct total mean of 38.47, SD 6.84. This mean represented scores in the range of to a high moderate extent of the teachers who participated in the study. The range of means in Affiliative construct (Table 20), part of the Constructive Style, varied from 34.6 to 44.4 with a construct total mean of 40.73, SD 6.62. This indicated that teachers' responses fell into the range of to a great extent.

Within the Passive/Defensive Style, the teachers indicated that the range of mean scores for the Approval construct (Table 21) varied from 19.5 to 34.9 with a construct total mean of 26.88, SD 6.99. This total construct mean indicated a score represented in the range of to a slight extent. In the Conventional construct (Table 22) teachers' mean scores ranged from 19.3 to 38.9 with a mean construct total of 28.08, SD 7.96 in the range of to a slight extent.

In the Passive/Defensive style, the Dependent construct (Table 23), the teachers reported a range of mean scores from 22.1 to 42.00. The total mean score of 30.56, SD 6.56, represented teachers' responses in the moderate extent range. The spread of the means in the Avoidance construct (Table 24), part of the Passive/Defensive Style, varied from 15.5 to 25.4 with a

Table 20

Summary of Teachers' Responses for the AffiliativeConstruct

Question	1(0) Not at all	Valid 2(0) To a slight extent	Mean 3(0) To a moderate extent	Percent 4(0) To a great extent	5(0) To a very great extent)	Mean(0)	SD
q61	.6	3.0	10.1	34.3	52.1	4.34	.82
q62	0.0	1.8	6.5	37.3	54.4	4.44	.70
q63	1.8	7.7	31.5	40.5	18.5	3.66	.93
q64	1.2	3.0	9.5	35.1	51.2	4.32	.86
q76	1.2	1.8	8.9	33.7	54.4	4.38	.82
q77	1.2	1.8	10.1	31.4	55.6	4.38	.83
q78	3.6	14.8	34.3	26.6	20.7	3.46	1.09
q91	2.4	10.1	26.2	35.7	25.6	3.72	1.03
q92	2.4	4.8	20.4	35.3	37.1	4.00	.99
q106	1.8	2.4	16.1	38.7	41.1	4.15	.90
Construct TOTAL						40.73	6.62

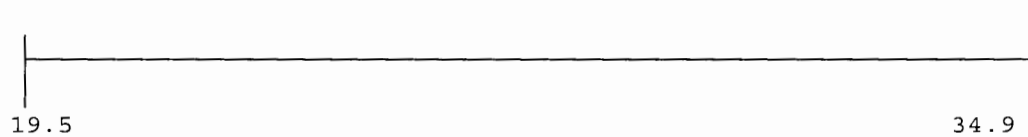


RANGE OF RESPONSE MEANS

Table 21

Summary of Teachers' Responses for the ApprovalConstruct

Question	<u>Valid</u>					Mean(0)	SD
	1(0) Not at all	2(0) To a slight extent	3(0) To a moderate extent	4(0) To a great extent	5(0) To a very great extent		
q6	4.1	7.1	37.9	37.3	13.6	3.49	.96
q7	2.4	11.2	42.0	27.2	17.2	3.46	.98
q8	11.2	33.7	34.3	14.8	5.9	2.70	1.04
q9	10.7	28.4	36.1	17.2	7.7	2.83	1.08
q21	31.4	30.8	26.6	9.5	1.8	2.02	1.04
q22	45.0	28.4	16.0	8.3	2.4	1.95	1.08
q23	16.1	35.1	32.1	14.9	1.8	2.51	.99
q36	13.1	17.3	35.1	22.6	11.9	3.03	1.19
q37	37.5	24.4	24.4	9.5	4.2	2.18	1.16
q51	20.2	25.6	33.9	14.9	5.4	2.60	1.13
Construct TOTAL						26.88	6.99

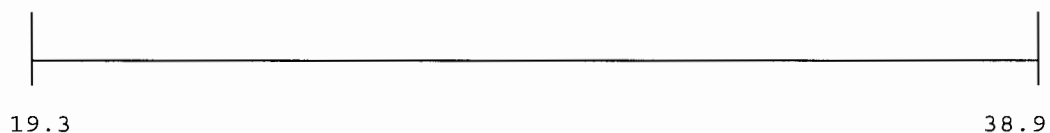


RANGE OF RESPONSE MEANS

Table 22

Summary of Teachers' Responses for the Conventional
Construct

Question	Valid		Mean		Percent		Mean (0)	SD
	1 (0) Not at all	2 (0) To a slight extent	3 (0) To a moderate extent	4 (0) To a great extent	5 (0) To a very great extent			
q67	14.3	20.2	35.1	20.2	10.1	2.92	1.18	
q68	10.7	20.8	33.9	20.8	13.7	3.06	1.18	
q69	3.6	5.9	24.3	42.6	23.7	3.77	.99	
q70	11.2	25.4	37.9	15.4	10.1	2.88	1.12	
q83	35.9	25.7	24.6	9.6	4.2	2.20	1.15	
q84	45.6	30.2	13.0	7.7	3.6	1.93	1.10	
q85	29.6	24.3	29.6	7.1	9.5	2.43	1.25	
q99	3.0	4.8	22.6	39.3	30.4	3.89	.99	
q100	25.7	35.3	24.6	11.4	3.0	2.31	1.07	
q115	10.2	32.9	30.5	15.0	11.4	2.84	1.15	
Construct TOTAL						28.08	7.96	



RANGE OF RESPONSE MEANS

Table 23

Summary of Teachers' Responses for the Dependent
Construct

Question	<u>Valid</u>		<u>Mean</u>		<u>Percent</u>		Mean (0)	SD
	1 (0)	2 (0)	3 (0)	4 (0)	5 (0)			
	Not	To a	To a	To a	To a	To a		
	at	slight	moderate	great	very	great		
	all	extent	extent	extent	extent	extent)		
q12	11.9	28.0	29.8	23.2	7.1	2.86	1.12	
q13	15.4	21.9	37.3	21.9	3.6	2.76	1.07	
q14	12.4	26.0	31.4	22.5	7.7	2.87	1.13	
q15	0.0	3.6	13.6	42.6	40.2	4.20	.80	
q28	18.3	27.2	32.5	18.3	3.6	2.62	1.09	
q29	27.2	33.7	30.2	8.3	.6	2.21	.96	
q30	2.4	14.8	39.6	25.4	17.8	3.41	4.02	
q44	23.7	34.9	18.3	13.0	10.1	2.51	1.26	
q45	.6	10.7	33.9	32.7	22.0	3.65	.96	
q60	2.4	11.4	32.9	34.7	18.6	3.56	1.00	
Construct						30.56	6.56	
TOTAL								

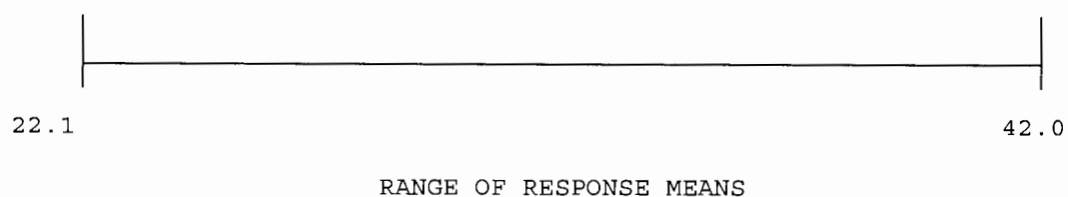


Table 24

Summary of Teachers' Responses for the AvoidanceConstruct

Question	<u>Valid</u>		<u>Mean</u>	<u>Percent</u>		Mean(0)	SD
	1(0) Not at all	2(0) To a slight extent	3(0) To a moderate extent	4(0) To a great extent	5(0) To a very great extent		
q71	46.7	28.7	18.0	5.4	1.2	1.86	.98
q72	38.7	29.2	17.3	9.5	5.4	2.14	1.19
q73	29.8	27.4	29.2	11.9	1.8	2.29	1.07
q74	52.7	27.8	14.8	3.6	1.2	1.73	.92
q86	64.7	21.0	10.2	3.0	1.2	1.55	.88
q87	37.5	27.4	23.2	8.9	3.0	2.12	1.11
q88	37.5	30.4	17.3	8.3	6.5	2.16	1.21
q101	52.7	26.9	10.8	9.0	.6	1.78	1.00
q102	47.9	30.5	14.4	6.0	1.2	1.82	.97
q116	18.5	31.5	30.9	15.4	3.7	2.54	1.08
Construct TOTAL						19.75	6.99



RANGE OF RESPONSE MEANS

construct total mean of 19.75, SD 6.99, which fell into the not representative at all range for the data obtained.

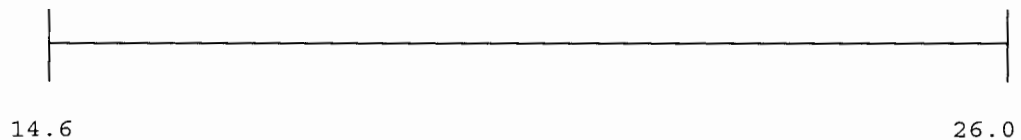
Within the Passive/Aggressive Style, in the Oppositional construct, teachers' mean scores ranged from 14.6 to 26.0 with a mean construct total of 18.63, SD 5.09 (Table 25). This indicated that the teachers' total mean score represented the range of not at all at the time of the survey. In the Power construct (Table 26), the teachers reported a range of mean scores from 19.4 to 28.0. The total mean score of 22.36, SD 6.90 represented to a slight extent, the teachers' responses at the time in which the data collection took place.

Also in the Passive/Aggressive style, the teachers indicated that the range of mean scores for the Competitive construct (Table 27) varied from 14.1 to 25.3 with a construct total mean of 18.28, SD 6.71. The total mean score indicated that the data fell into the not at all representative category. The range of means in the Perfectionistic construct (Table 28), part of the Passive/Aggressive Style, varied from 17.9 to 39.2 with a construct total mean of 28.66, SD 7.36. The indicated mean total for the teachers was in the to a slight extent range at the time the survey was completed.

Table 25

Summary of Teachers' Responses for the Oppositional
Construct

Question	1(0) Not at all	Valid 2(0) To a slight extent	Mean 3(0) To a moderate extent	Percent		Mean(0)	SD
				4(0) To a great extent	5(0) To a very great extent		
q1	38.7	36.9	20.8	3.6	0.0	1.89	.85
q16	16.0	28.4	39.6	11.2	4.7	2.60	1.04
q17	59.2	29.0	8.3	3.0	.6	1.57	.81
q31	57.6	24.2	15.2	1.8	1.2	1.65	.89
q32	39.9	33.9	19.0	6.0	1.2	1.95	.97
q33	46.1	29.3	16.2	7.2	1.2	1.88	1.00
q46	13.6	54.4	24.9	5.9	1.2	2.27	.81
q47	47.3	30.2	17.2	4.1	1.2	1.82	.94
q48	68.5	20.8	7.7	2.4	.6	1.46	.79
q49	50.0	29.7	15.2	4.4	.6	1.76	.91
Construct TOTAL						18.63	5.09

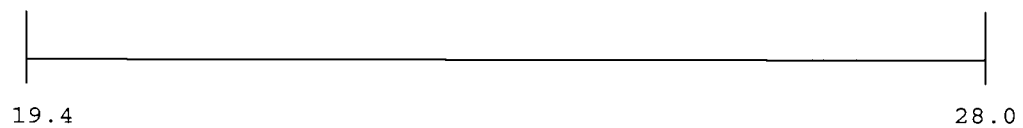


RANGE OF RESPONSE MEANS

Table 26

Summary of Teachers' Responses for the Power
Construct

Question	<u>Valid</u>					Mean(0)	SD
	1(0)	2(0)	3(0)	4(0)	5(0)		
	Not	To a	To a	To a	To a		
	at	slight	moderate	great	very		
	all	extent	extent	extent	great		
					extent		
q65	30.7	32.5	22.3	11.4	3.0	2.23	1.10
q79	17.8	21.3	34.3	16.0	10.7	2.80	1.22
q80	24.6	25.1	26.9	16.8	6.6	2.56	1.22
q93	38.1	25.6	21.4	11.9	3.0	2.16	1.15
q94	38.6	31.3	16.3	10.2	3.6	2.09	1.13
q95	43.5	19.6	19.0	12.5	5.4	2.17	1.26
q107	26.5	33.7	26.5	7.8	5.4	2.32	1.11
q108	39.5	22.8	19.2	12.0	6.6	2.23	1.27
q109	41.3	32.9	19.2	3.6	3.0	1.94	1.01
q110	37.3	29.5	21.7	7.2	4.2	2.11	1.12
Construct						22.36	6.90
TOTAL							

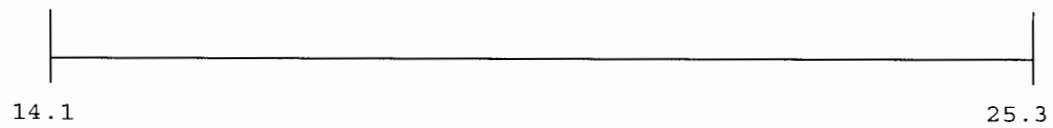


RANGE OF RESPONSE MEANS

Table 27

Summary of Teachers' Responses for the Competitive
Construct

Question	Valid		Mean	Percent		Mean	SD
	1(0) Not at all	2(0) To a slight extent	3(0) To a moderate extent	4(0) To a great extent	5(0) To a very great extent		
q10	64.7	22.2	9.6	3.0	.6	1.53	.83
q24	39.6	25.4	25.4	7.1	2.4	2.07	1.07
q25	30.8	35.5	22.5	7.1	4.1	2.18	1.08
q38	60.7	23.2	11.3	1.8	3.0	1.63	.96
q39	64.3	24.2	7.7	1.8	1.8	1.52	.85
q40	55.4	23.5	14.5	5.4	1.2	1.73	.98
q52	43.5	32.1	17.3	5.4	1.8	1.90	.99
q53	22.6	28.0	27.4	17.9	4.2	2.53	1.15
q54	49.4	25.6	14.3	8.3	2.4	1.89	1.09
q55	75.0	14.3	6.0	4.2	.6	1.41	.83
Construct TOTAL						18.28	6.71



RANGE OF RESPONSE MEANS

Table 28

Summary of Teachers' Responses for the
Perfectionistic Construct

Question	1(0) Not at all	<u>Valid</u> 2(0) To a slight extent	<u>Mean</u> 3(0) To a moderate extent	<u>Percent</u> 4(0) To a great extent	5(0) To a very great extent	Mean(0)	SD
q66	14.4	17.4	34.7	24.6	9.0	2.96	1.17
q81	8.9	17.2	33.7	21.3	18.9	3.24	1.20
q82	44.6	26.8	15.5	8.9	4.2	2.01	1.16
q96	53.6	25.0	12.5	6.5	2.4	1.79	1.05
q97	27.4	28.0	25.6	16.1	3.0	2.39	1.14
q98	4.2	7.7	28.6	35.7	23.8	3.67	1.05
q111	23.8	18.5	34.5	20.2	3.0	2.60	1.14
q112	28.7	25.7	28.1	11.4	6.0	2.40	1.19
q113	1.8	4.8	21.4	44.0	28.0	3.92	.92
q114	.6	9.0	21.7	38.0	30.7	3.89	.97
Construct						28.66	7.36
TOTAL							



RANGE OF RESPONSE MEANS

The total means on the responses of the principals and the teachers (Table 29). suggests that both groups rated the culture of the schools highest in the four constructs that are part of the Constructive culture (Achievement, Self-Actualizing, Humanistic-Encouraging, and Affiliative). The data also indicate that both groups rated the four Passive-Defensive constructs (Approval, Conventional, Dependent, and Avoidance) and the four Passive-Aggressive constructs (Oppositional, Power, Competitive, and Perfectionistic) similarly with total lower mean scores.

Table 29

Summary of Construct Valid Mean Total Comparison for
Principals and Teachers

Construct	Valid Mean Total Principals	Valid Mean Total Teachers
Achievement	41.23 to a great extent	38.01 to a high moderate extent
Self-Actualizing	38.77 to a high moderate extent	41.20 to a great extent
Humanistic- Encouraging	42.38 to a great extent	38.47 to a high moderate extent
Affiliative	44.00 to a great extent	40.73 to a great extent
Approval	24.85 to a slight extent	26.88 to a slight extent
Conventional	26.77 to a slight extent	28.08 to a slight extent
Dependent	27.54 to a slight extent	30.56 to a moderate extent
Avoidance	17.00 not representative	19.75 not representative
Power	18.69 not representative	18.63 not representative
Competitive	24.77 to a slight extent	22.36 to a slight extent
Perfectionistic	18.38 not representative	18.28 not representative
	31.38 to a moderate extent	28.66 to a slight extent

Inferential Data

An independent-sample t-test was run for gender, level of education and to analyze the overall difference between principals' and teachers' perception of school culture. The ANOVA test with a follow-up Tukey HSD post hoc was run on the group of principals and teachers (N=182) as the principal number (N=13) was not robust enough to break out separately for age, years with the school district and district factor group. The statistical significance of this study was set at the $p < .05$ threshold. Statistical results of a p value between .051 and .100 were considered trends.

The research question, based upon teachers' and principals' perceptions of school culture, what is the associated potential for teacher leadership, was subsequently broken down into sub problems.

In sub-problem one, the researcher asked what effect does gender have upon principals' and teachers' perception of school culture and the associated potential for teacher leadership. The independent-samples t-test (Table 30) analysis indicated that there was no significant difference in the responses between the females and males who participated in this study and how each group viewed the culture of the school.

Table 30

Independent Samples t-Test Results for Gender

			Group			
			N	Mea	Std. Deviatio	Std. Mea
Achieveme	Gende	Femal	154	38.3	5.79	.46
		Mal	28	37.7	6.53	1.23
Self-	Gende	Femal	154	34.7	6.80	.54
		Mal	28	35.3	7.31	1.38
Humanistic-	Gende	Femal	154	38.5	6.89	.55
		Mal	28	39.7	6.65	1.25
Affiliati	Gende	Femal	154	41.0	6.49	.52
		Mal	28	40.2	6.82	1.29
Approv	Gende	Femal	154	26.7	7.17	.57
		Mal	28	26.5	5.52	1.04
Conventio	Gende	Femal	154	28.0	7.84	.63
		Mal	28	27.6	7.87	1.48
Depende	Gende	Femal	154	30.5	6.71	.54
		Mal	28	29.5	5.21	.98
Avoidan	Gende	Femal	154	19.3	6.96	.56
		Mal	28	20.8	7.10	1.34
Oppositio	Gende	Femal	154	18.4	4.96	.40
		Mal	28	19.7	5.34	1.01
Powe	Gende	Femal	154	22.4	6.80	.54
		Mal	28	22.9	7.32	1.38
Competiti	Gende	Femal	154	18.0	6.39	.51
		Mal	28	19.5	7.55	1.42
Perfectionis	Gende	Femal	154	28.8	7.23	.58
		Mal	28	29.0	8.07	1.52

Independent Samples Test

		t-test for Equality of Means				
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Achievement	Equal variance assumed	.473	180	.637	.57	1.215
Self-Actualizing	Equal variance assumed	-.384	180	.702	-.54	1.414
Humanistic-Encouraging	Equal variance assumed	-.836	180	.404	-1.18	1.409
Affiliative	Equal variance assumed	.625	180	.533	.84	1.345
Approval	Equal variance assumed	.195	180	.845	.28	1.429
Conventional	Equal variance assumed	.280	180	.780	.45	1.612
Dependent	Equal variance assumed	.748	180	.456	1.00	1.338
Avoidance	Equal variance assumed	-1.077	180	.283	-1.55	1.435
Oppositional	Equal variance assumed	-1.316	180	.190	-1.36	1.032
Power	Equal variance assumed	-.360	180	.719	-.51	1.415
Competitive	Equal variance assumed	-1.087	180	.278	-1.47	1.353
Perfectionistic	Equal variance assumed	-.144	180	.886	-.22	1.513

In the Achievement construct the 154 females had a mean response of 38.32, the 28 males had a mean response of 37.75 with $t = .473$. The means did not differ significantly ($p=.637$) equal variances assumed. In the Self-Actualizing construct the 154 females had a mean response of 34.78, the 28 males had a mean response of 35.32, and the means did not differ significantly ($p=.702$) equal variances assumed with $t= -.384$. In the Humanistic-Encouraging construct the 154 females had a mean response of 38.57 and the 28 males had a mean response of 39.75. The means did not differ significantly ($p=.404$) with $t=-.836$ equal variances assumed. In the Affiliative construct the 154 females had a mean response of 41.09, the 28 males had a mean response of 40.25 with $t=.625$. The means did not differ significantly ($p=.533$), equal variances assumed.

In the Approval construct the 154 females had a mean response of 26.78, the 28 males had a mean response of 26.50, and the means did not differ significantly $t=.195$ with $p=.845$ equal variances assumed. In the Conventional construct the 154 females had a mean response of 28.06 and the 28 males had a mean response of 27.61. $t=.280$ and the means did not differ significantly ($p=.780$) equal

variances assumed. In the Dependent construct the 154 females had a mean response of 30.50, the 28 males had a mean response of 29.50, and the means did not differ significantly ($p=.456$) equal variances assumed $t=.748$. In the Avoidance construct the 154 females had a mean response of 19.31, the 28 males had a mean response of 20.86 where $t=-1.077$. The means did not differ significantly ($p=.283$) equal variances assumed.

In the Oppositional construct the 154 females had a mean response of 18.43, the 28 males had a mean response of 19.79. The means did not differ significantly $t= -1.316$ and $p=.190$ equal variances assumed. In the Power construct the 154 females had a mean response of 22.45 and the 28 males had a mean response of 22.96. The means did not differ significantly where $p=.719$, equal variances assumed, and $t=-.360$. In the Competitive construct $t=-1.087$. The 154 females had a mean response of 18.06, the 28 males had a mean response of 19.54, and the means did not differ significantly ($p=.278$) equal variances assumed. In the Perfectionistic construct the 154 females had a mean response of 28.82 while the 28 males had a mean response of 29.04 $t=-.144$. The means did not differ significantly ($p=.886$) equal variances assumed.

In the independent samples t-test run on gender there were no instances where Levene's test for equality of variances was significant. The data from the independent sample t-test suggest that in the population of elementary teachers and principals surveyed, there was no significant difference in the way male and female teachers and principals viewed the culture of their schools and the associated potential for teacher leadership.

In sub-problem two the study examined what effect the level of educational attainment had upon principals' and teachers' perception of school culture and the associated potential for teacher leadership. The analysis of the independent-samples t-test (Table 31) indicated that in three constructs (Achievement, Self-Actualizing, Affiliative) there was a statistically significant difference in the responses between those who held Master's degrees and above and those whose level of education was below a Masters in how each group viewed the culture of the school and the associated potential for teacher leadership. The breakdown indicated that in the Achievement construct the 98 respondents below a Masters Degree had a mean response of 37.49, and the 80 respondents, Masters and above, had a mean of 39.56. The

Table 31

Independent Samples t-Test Results for
Educational Level

Group Statistics

			N	Mean	Std. Deviation	Std. Error Mean
Achievement	Educational	Below Masters Degree	98	37.49	5.99	.60
		Masters and Above	80	39.56	5.29	.59
Self-Actualizing	Educational	Below Masters Degree	98	34.07	7.57	.76
		Masters and Above	80	36.30	5.39	.60
Humanistic-Encouraging	Educational	Below Masters Degree	98	38.32	6.57	.66
		Masters and Above	80	39.64	7.07	.79
Affiliative	Educational	Below Masters Degree	98	39.95	7.23	.73
		Masters and Above	80	42.58	5.03	.56
Approval	Educational	Below Masters Degree	98	26.44	7.50	.76
		Masters and Above	80	27.13	6.22	.70
Conventional	Educational	Below Masters Degree	98	27.46	8.30	.84
		Masters and Above	80	28.39	7.30	.82
Dependent	Educational	Below Masters Degree	98	30.24	6.85	.69
		Masters and Above	80	30.49	6.21	.69
Avoidance	Educational	Below Masters Degree	98	19.08	7.42	.75
		Masters and Above	80	19.70	6.26	.70
Oppositional	Educational	Below Masters Degree	98	18.32	4.89	.49
		Masters and Above	80	18.89	5.26	.59
Power	Educational	Below Masters Degree	98	21.68	6.88	.69
		Masters and Above	80	23.51	6.83	.76
Competitive	Educational	Below Masters Degree	98	18.41	7.13	.72
		Masters and Above	80	17.98	5.70	.64
Perfectionistic	Educational	Below Masters Degree	98	28.32	8.06	.81
		Masters and Above	80	29.66	6.31	.71

Independent Samples Test

		t-test for Equality of Means				
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Achievement	Equal variances assumed	-2.420	176	.017	-2.07	.86
	Equal variances not assumed					
Self-Actualizing	Equal variances assumed	-2.214	176	.028	-2.23	1.01
	Equal variances not assumed					
Humanistic-Encouragi	Equal variances assumed	-1.290	176	.199	-1.32	1.02
	Equal variances not assumed					
Affiliative	Equal variances assumed					
	Equal variances not assumed	-2.851	171.906	.005	-2.63	.92
Approval	Equal variances assumed	-.655	176	.513	-.69	1.05
	Equal variances not assumed					
Conventional	Equal variances assumed	-.783	176	.435	-.93	1.19
	Equal variances not assumed					
Dependent	Equal variances assumed	-.245	176	.807	-.24	.99
	Equal variances not assumed					
Avoidance	Equal variances assumed	-.593	176	.554	-.62	1.04
	Equal variances not assumed					
Oppositional	Equal variances assumed	-.749	176	.455	-.57	.76
	Equal variances not assumed					
Power	Equal variances assumed	-1.770	176	.078	-1.83	1.03
	Equal variances not assumed					
Competitive	Equal variances assumed	.440	176	.660	.43	.98
	Equal variances not assumed					
Perfectionistic	Equal variances assumed					
	Equal variances not assumed	-1.250	175.710	.213	-1.35	1.08

mean difference of -2.07 was statistically significant $p = .017$, equal variance assumed, with $t=-2.420$. In the Self-Actualizing construct, the analysis showed the 98 respondents below a Masters Degree had a mean response of 34.07 and those with a Masters and above had a mean response of 36.30. The mean difference of -2.23 between the two groups was statistically significant with a p value of .028 equal variance assumed where $t=-2.214$.

The analysis also indicated statistical significance in the Affiliative construct. The 98 respondents below a Masters Degree had a mean response of 39.95 and those with a Masters and above had a mean response of 42.58. Levene's Test for Equality of Variances indicated $F=6.588$ with a $\text{Sig}=.011$ which requires equal variances not assumed to be displayed. The mean difference of -2.63 between the two groups was statistically significant with a p value of .007, $t=-2.851$ and equal variances were not assumed. In the Power construct, the 98 respondents below a Masters had a mean response of 21.68, the 80 respondents Masters and above had a mean response of 23.51. While the mean difference of -1.83 did not differ significantly ($p=.078$) equal variances assumed and $t=-1.770$, a trend was indicated. The differences in the means in the remaining nine constructs were not

statistically significant. In the Humanistic-Encouraging construct the 98 respondents below a Masters had a mean response of 38.32, the 80 respondents Masters and above had a mean response of 39.64, and the means did not differ significantly ($p=.199$) ($t=-1.290$) equal variances assumed.

In the Approval construct the 98 respondents below a Masters had a mean response of 26.44, the 80 respondents Masters and above had a mean response of 27.13, and the means did not differ significantly ($p=.513$) equal variances assumed where $t=-.655$. In the Conventional construct the 98 respondents below a Masters had a mean response of 27.46, the 80 respondents Masters and above had a mean response of 28.39, and the means did not differ significantly ($p=.435$) ($t=-.783$) equal variances assumed. In the Dependent construct the 98 respondents below a Masters had a mean response of 30.24, the 80 respondents Masters and above had a mean response of 30.49, and the means did not differ significantly ($p=.807$) ($t=-.245$) equal variances assumed. In the Avoidance construct the 98 respondents below a Masters had a mean response of 19.08, the 80 respondents Masters and above had a mean response of 19.70, and the means did

not differ significantly ($p=.554$) ($t=-.593$) equal variances assumed.

In the Oppositional construct the 98 respondents below a Masters had a mean response of 18.32, the 80 respondents Masters and above had a mean response of 18.89 with $t=-.749$. The means did not differ significantly ($p=.455$) equal variances assumed. In the Competitive construct the 98 respondents below a Masters had a mean response of 18.41, the 80 respondents Masters and above had a mean response of 17.89, and the means did not differ significantly ($p=.660$) ($t=.440$) equal variances assumed.

In the Perfectionistic construct the 98 respondents below a Masters had a mean response of 28.32 and the 80 respondents Masters and above had a mean response of 29.66. Levene's Test for Equality of Variances indicated $F=3.907$ with a Sig. $=.050$ which requires equal variances not assumed to be displayed. The mean difference of -1.35 between the two groups was not statistically significant with a p value of $.213$, $t=-1.250$ and equal variances were not assumed.

The results of the t -test on educational level suggests that in three of the four constructs associated with the potential for teacher leadership, those

respondents with a Masters degree and above rated the culture of the school significantly higher statistically than those respondents whose educational level was below a Masters. The mean difference reported between the two groups was Achievement -2.07; Self-Actualizing -2.23, and Affiliative -2.63.

Sub problem three examined the effect of age upon principals' and teachers' perception of school culture and the associated potential for teacher leadership. The age ranges were broken into five groups; 20-29 (N=22); 30-39 (N=31); 40-49 (N=48); 50-59 (N=69); 60 or over (N=8) with a N=178 of 182 total respondents. A One-way ANOVA (Table 32) was run on the data to determine if there was statistical significance between the groups in each of the 12 constructs. The results of the ANOVA showed that at the p level $<.05$ there was no statistically significant difference in the mean square between the groups in any of the constructs. However, the Power construct Between groups Mean Square of 102.859 indicated a trend where $p=.066$. A Post Hoc Tukey HSD (Table 33) was run on the Power construct data and this resulted in a significant difference of 3.65 in the mean squared between those respondents who reported their age between 40-49 with a mean score of 24.65 and those 50-59 with a

Table 32

One-way ANOVA Results for Age

ANOVA - Age

		Sum of Squares	df	Mean Square	F	Sig.
Achievement	Between Groups	100.213	4	25.053	.750	.559
	Within Groups	5777.338	173	33.395		
	Total	5877.551	177			
Self-Actualizing	Between Groups	149.768	4	37.442	.818	.516
	Within Groups	7923.423	173	45.800		
	Total	8073.191	177			
Humanistic-Encouraging	Between Groups	218.502	4	54.625	1.182	.320
	Within Groups	7992.262	173	46.198		
	Total	8210.764	177			
Affiliative	Between Groups	67.575	4	16.894	.401	.808
	Within Groups	7296.453	173	42.176		
	Total	7364.028	177			
Approval	Between Groups	365.898	4	91.474	1.961	.103
	Within Groups	8069.658	173	46.645		
	Total	8435.556	177			
Conventional	Between Groups	125.036	4	31.259	.507	.731
	Within Groups	10671.7	173	61.686		
	Total	10796.7	177			
Dependent	Between Groups	218.102	4	54.526	1.308	.269
	Within Groups	7212.577	173	41.691		
	Total	7430.680	177			
Avoidance	Between Groups	186.001	4	46.500	.981	.420
	Within Groups	8203.235	173	47.418		
	Total	8389.236	177			
Oppositional	Between Groups	15.964	4	3.991	.156	.960
	Within Groups	4416.058	173	25.526		
	Total	4432.022	177			
Power	Between Groups	411.434	4	102.859	2.242	.066
	Within Groups	7936.611	173	45.876		
	Total	8348.045	177			
Competitive	Between Groups	131.498	4	32.875	.776	.542
	Within Groups	7328.591	173	42.362		
	Total	7460.090	177			
Perfectionistic	Between Groups	205.736	4	51.434	.965	.428
	Within Groups	9216.174	173	53.273		
	Total	9421.910	177			

Table 33

Tukey Post Hoc Results for AgePower Construct

Power

Tukey HSD^{a,b}

		N	Subset for alpha = .05
			1
Age	50-59	69	21.00
	20-29	22	21.82
	30-39	31	22.87
	60 or over	8	24.13
	40-49	48	24.65
	Sig.		.410

Means for groups in homogeneous subsets are displayed.

- a. Uses Harmonic Mean Sample Size = 21.005.
- b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

reported mean score of 21.00.

The Achievement construct Between groups Mean Square of 25.053 was not significant $p=.559$; Self-Actualizing construct Between groups Mean Square of 37.442 was not significant $p=.516$; Humanistic-Encouraging construct Between groups Mean Square of 54.625 $p=.320$; Affiliative construct Between groups Mean Square of 16.894 was not significant $p=.808$; Approval construct Between groups Mean Square of 91.474 was not significant $p=.103$; Conventional construct Between groups Mean Square of 31.259 was not significant $p=.731$.

The Dependent construct Between groups Mean Square of 54.526 was not significant $p=.269$; Avoidance construct Between groups Mean Square of 46.500 was not significant $p=.420$; Oppositional construct Between groups Mean Square of 15.964 was not significant $p=.960$; Competitive construct Between groups Mean Square of 32.875 was not significant $p=.542$; Perfectionistic construct Between groups Mean Square of 51.434 was not significant $p=.428$.

The results of the ANOVA run on age suggests that except in the Power construct, there is no statistically significant difference between age groups and the respondents' perceptions of school culture and

the associated potential for teacher leadership. There the data suggests that there is a statistically significant difference in the mean squared of 3.65 between those respondents who ranged in age from 40-49 with a mean score of 24.65 and 50-59 with a mean score of 21.00 with those in the 40-49 age range indicating a higher response in the area of Power.

Sub-problem four examined the effect years with the school district had upon principals' and teachers' perception of school culture and the associated potential for teacher leadership. The data was grouped into the following ranges regarding years experience with the school district: less than 6 months; 6 months-1year; 1-2 years; 2-4 years; 4-6 years; 6-10 years; 10-15 years; and more than 15 years. An ANOVA (Table 34) was run on the data and statistical significance was achieved in the Self-Actualizing and Humanistic-Encouraging constructs.

In the Self-Actualizing construct, the mean square (109.228) was reported as statistically significant (.015) with a mean square difference of 9.79 between those respondents who fell into the experience range of 1 to 2 years (40.33) and 4 to 6 years (30.54). In the Humanistic-Encouraging construct, the mean square (105.068) was reported as statistically significant

TABLE 34

One-way ANOVA Results for Years With The School

ANOVA - Years Experience

		Sum of Squares	df	Mean Square	F	Sig.
Achievement	Between Groups	270.726	7	38.675	1.174	.320
	Within Groups	5501.651	167	32.944		
	Total	5772.377	174			
Self-Actualizing	Between Groups	764.593	7	109.228	2.579	.015
	Within Groups	7071.715	167	42.346		
	Total	7836.309	174			
Humanistic-Encouragin	Between Groups	735.478	7	105.068	2.379	.024
	Within Groups	7375.379	167	44.164		
	Total	8110.857	174			
Affiliative	Between Groups	247.112	7	35.302	.839	.556
	Within Groups	7025.745	167	42.070		
	Total	7272.857	174			
Approval	Between Groups	193.551	7	27.650	.568	.781
	Within Groups	8122.426	167	48.637		
	Total	8315.977	174			
Conventional	Between Groups	691.303	7	98.758	1.671	.119
	Within Groups	9867.417	167	59.086		
	Total	10558.7	174			
Dependent	Between Groups	567.872	7	81.125	1.961	.063
	Within Groups	6907.557	167	41.363		
	Total	7475.429	174			
Avoidance	Between Groups	237.915	7	33.988	.722	.654
	Within Groups	7864.085	167	47.090		
	Total	8102.000	174			
Oppositional	Between Groups	132.036	7	18.862	.728	.649
	Within Groups	4329.541	167	25.925		
	Total	4461.577	174			
Power	Between Groups	161.136	7	23.019	.474	.852
	Within Groups	8107.573	167	48.548		
	Total	8268.709	174			
Competitive	Between Groups	229.604	7	32.801	.768	.615
	Within Groups	7134.316	167	42.720		
	Total	7363.920	174			
Perfectionistic	Between Groups	346.398	7	49.485	.928	.487
	Within Groups	8909.579	167	53.351		
	Total	9255.977	174			

(.024) with a mean square difference of 4.10 between those respondents who fell into the experience range of 10 to 15 years (36.04) and < 15 years (40.14).

Two of the constructs pointed toward trends with statistical significance indicated at $p=.119$ (Conventional) and $p=.063$ (Dependent). A Tukey Post Hoc HSD test was run on each set of data (Tables 35, 36, 37, 38). In the Conventional construct there was a statistically significant difference in the mean squared between 2 to 4 years experience (23.93) and 6 to 10 years experience (32.00) of -8.07. In the Dependent construct the Tukey post hoc HSD produced a statistically significant difference in the mean squared between 2 to 4 years experience (27.14) and 6 to 10 years experience (34.43) of -7.29.

In the remaining constructs there was no reported statistically significant difference between the years experience of the groups; Achievement $p=.320$; Affiliative $p=.556$; Approval $p=.781$; Avoidance $p=.654$; Oppositional $p=.649$; Power $p=.852$; Competitive $p=.615$, and Perfectionistic $p=.487$. The results suggest that in two of the constructs associated with Constructive Culture, Self-Actualizing and Humanistic-Encouraging, there was a

Table 35

Tukey Post Hoc Results for Years With the School
Self-Actualizing Construct

Self-Actualizing

Tukey HSD^{a,b}

	N	Subset for alpha = .05	
		1	2
4 to 6 years	13	30.54	
10 to 15 years	46	33.63	33.63
2 to 4 years	14	34.43	34.43
6 to 10 years	21	34.57	34.57
More than 15 years	57	36.21	36.21
Less than 6 months	6	36.50	36.50
6 months to 1 year	9	37.56	37.56
1 to 2 years	9		40.33
Sig.		.114	.153

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 12.818.

b. The group sizes are unequal. The harmonic mean of the group sizes is used.
 Type I error levels are not guaranteed.

Table 36

Tukey Post Hoc Results for Years With the SchoolHumanistic-Encouraging Construct

Humanistic-Encouraging

Tukey HSD^{a,b}

		N	Subset for alpha = .05
			1
Years with Organization	10 to 15 years	46	36.04
	4 to 6 years	13	37.15
	6 to 10 years	21	38.48
	2 to 4 years	14	39.36
	More than 15 years	57	40.14
	6 months to 1 year	9	41.56
	1 to 2 years	9	42.11
	Less than 6 months	6	42.33
	Sig.		.243

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 12.818.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Table 37

Tukey Post Hoc Results for Years With the SchoolConventional Construct

Conventional

Tukey HSD^{a,b}

		N	Subset for alpha = .05
			1
Years with Organization	2 to 4 years	14	23.93
	6 months to 1 year	9	25.67
	Less than 6 months	6	27.00
	4 to 6 years	13	27.08
	More than 15 years	57	27.63
	10 to 15 years	46	28.46
	1 to 2 years	9	30.11
	6 to 10 years	21	32.00
	Sig.		.136

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 12.818.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Table 38

Tukey Post Hoc Results for Years With the SchoolDependent Construct

		Dependent	
Tukey HSD ^{a,b}			Subset for alpha = .05
		N	1
Years with Organization	2 to 4 years	14	27.14
	More than 15 years	57	29.54
	10 to 15 years	46	30.11
	Less than 6 months	6	30.67
	4 to 6 years	13	31.31
	6 months to 1 year	9	31.33
	1 to 2 years	9	31.67
	6 to 10 years	21	34.43
	Sig.		.079

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 12.818.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

statistically significant difference between those with less experience (1 to 2 years) and greatest experience (more than 15 years) both of whom tended to rate the culture higher in these two areas and those teachers and principals whose experience was either 4 to 6 years or 10 to 15 years.

The data also suggests that in two of the constructs associated with a Passive-Defensive culture, Dependent and Conventional, there was a statistically significant difference between those with less experience (2 to 4 years) and those with experience in the range of 6 to 10 years where those respondents who had less experience with the organization rated the culture lower in the dependent and conventional constructs.

Sub-problem five examined the impact a school district's District Factor Grouping had upon principals' and teachers' perception of school culture and the associated potential for teacher leadership. The data was grouped into the following DFG's: CD; DE; FG, and GH. An ANOVA (Table 39) was run and statistical significance was indicated in the Self-Actualizing, Humanistic-Encouraging, and Affiliative constructs with a

Table 39

One-way ANOVA Results for District Factor Group

		ANOVA - DFG				
		Sum of Squares	df	Mean Square	F	Sig.
Achievement	Between Groups	216.863	3	72.288	2.115	.100
	Within Groups	6083.977	178	34.180		
	Total	6300.841	181			
Self-Actualizing	Between Groups	424.006	3	141.335	3.104	.028
	Within Groups	8105.560	178	45.537		
	Total	8529.566	181			
Humanistic-Encouragin	Between Groups	430.193	3	143.398	3.162	.026
	Within Groups	8071.681	178	45.347		
	Total	8501.874	181			
Affiliative	Between Groups	467.932	3	155.977	3.823	.011
	Within Groups	7262.799	178	40.802		
	Total	7730.731	181			
Approval	Between Groups	27.202	3	9.067	.186	.906
	Within Groups	8678.139	178	48.754		
	Total	8705.341	181			
Conventional	Between Groups	147.375	3	49.125	.799	.496
	Within Groups	10940.6	178	61.464		
	Total	11088.0	181			
Dependent	Between Groups	87.623	3	29.208	.687	.561
	Within Groups	7565.569	178	42.503		
	Total	7653.192	181			
Avoidance	Between Groups	299.953	3	99.984	2.083	.104
	Within Groups	8543.102	178	47.995		
	Total	8843.055	181			
Oppositional	Between Groups	152.563	3	50.854	2.044	.109
	Within Groups	4429.503	178	24.885		
	Total	4582.066	181			
Power	Between Groups	100.226	3	33.409	.704	.551
	Within Groups	8447.076	178	47.455		
	Total	8547.302	181			
Competitive	Between Groups	63.418	3	21.139	.483	.695
	Within Groups	7792.147	178	43.776		
	Total	7855.566	181			
Perfectionistic	Between Groups	353.317	3	117.772	2.228	.087
	Within Groups	9409.677	178	52.863		
	Total	9762.995	181			

statistical trend indicated in the Achievement and Perfectionistic constructs.

The data run on the Self-Actualizing construct indicated a between groups mean square of 141.335 which was statistically significant where $p=.028$. The Humanistic-Encouraging construct demonstrated a between groups mean square of 143.335 and statistical significance of .026. and the Affiliative construct indicated a statistical significance of $p=.011$ with a between groups mean square of 155.977. The Achievement construct indicated a trend with the statistical significance of $p=.100$ and a between group mean square of 72.288 as did the Perfectionistic construct with a p value of .087 and a between group mean square of 117.772

A Tukey Post Hoc HSD (Tables 40, 41, 42, 43, 44) was run on the data and statistical significance was upheld in the Self-Actualizing and Affiliative constructs. In the Self-Actualizing construct the analysis determined that the mean square difference of -8.63 was statistical significant between the CD and the FG districts in this study. The Post Hoc ran on the Affiliative construct also indicated a statistical significance between the CD and DE/FG districts with a respective mean difference of -8.48 and -9.60.

Table 40

Tukey Post Hoc Results for DFG Self-ActualizingConstruct

Self-Actualizing

Tukey HSD^{a,b}

	N	Subset for alpha = .05	
		1	2
C	5	27.20	
DE	59		34.02
DFG GH	24		34.75
FG	94		35.83
Sig.		1.000	.884

Means for groups in homogeneous subsets are displayed.

- a. Uses Harmonic Mean Sample Size = 14.856.
- b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Table 41

Tukey Post Hoc Results for DFG Humanistic-EncouragingConstruct

Humanistic-Encouraging

Tukey HSD^{a,b}

	N	Subset for alpha = .05	
		1	2
C	5	32.40	
GH	24	36.42	36.42
DFG DE	59	38.63	38.63
FG	94		39.77
Sig.		.057	.527

Means for groups in homogeneous subsets are displayed.

- a. Uses Harmonic Mean Sample Size = 14.856.
- b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Table 42

Tukey Post Hoc Results for DFG AffiliativeConstruct

Affiliative

Tukey HSD^{a,b}

	N	Subset for alpha = .05	
		1	2
C	5	32.20	
GH	24		40.21
DFG DE	59		40.68
FG	94		41.80
Sig.		1.000	.905

Means for groups in homogeneous subsets are displayed.

- a. Uses Harmonic Mean Sample Size = 14.856.
- b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Table 43

Tukey Post Hoc Results for DFG AchievementConstruct

Achievement

Tukey HSD^{a,b}

		N	Subset for alpha = .05
			1
	C	5	34.80
	GH	24	36.25
DFG	DE	59	38.05
	FG	94	39.04
	Sig.		.196

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 14.856.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Table 44

Tukey Post Hoc Results for DFG PerfectionisticConstruct

Perfectionistic

Tukey HSD ^{a,b}

		N	Subset for alpha = .05
			1
	FG	94	27.80
	GH	24	27.96
DFG	C	5	30.00
	DE	59	30.80
	Sig.		.675

Means for groups in homogeneous subsets are displayed.

- a. Uses Harmonic Mean Sample Size = 14.856.
- b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

This data suggest that the lower District Factor Group rated the culture of the school significantly lower statistically in the Self-Actualizing and Affiliative constructs than did those districts that fell into the DE and FG groupings. The data also indicate that there was a strong trend in the difference in the way the CD factor group rated the school culture in the Humanistic-Encouraging and Achievement constructs as opposed to the FG factor group with the CD group rating the school culture lower in those constructs that are part of the Constructive culture. The data also suggest that the CD group rated the school culture higher in the Perfectionistic construct than did the FG factor group.

Sub-problem six (Table 45) examined whether or not there was a statistically significant difference in the overall perceptions of principals and teachers regarding the organizational culture of schools and the associated potential for teacher leadership. An independent samples *t*-test was run on the data from principals (N=13) and teachers (N=169). Statistical significance and strong trends were found in the four constructs that are part of the Constructive culture set. In the Self-Actualizing construct the reported mean for the principals was 38.77 and for the teachers 34.56 with $t=2.151$. The difference

Table 45

Independent Samples t-test Results for Principals
and Teachers

Group Statistics

			N	Mean	Std. Deviation	Std. Error Mean
Achievement	Group	Principals	13	41.23	5.150	1.428
		Teachers	169	38.01	5.904	.454
Self-Actualizing	Group	Principals	13	38.77	5.819	1.614
		Teachers	169	34.56	6.862	.528
Humanistic-Encouragin	Group	Principals	13	42.38	6.212	1.723
		Teachers	169	38.47	6.837	.526
Affiliative	Group	Principals	13	44.00	4.546	1.261
		Teachers	169	40.73	6.616	.509
Approval	Group	Principals	13	24.85	6.176	1.713
		Teachers	169	26.88	6.985	.537
Conventional	Group	Principals	13	26.77	5.904	1.638
		Teachers	169	28.08	7.962	.612
Dependent	Group	Principals	13	27.54	5.027	1.394
		Teachers	169	30.56	6.565	.505
Avoidance	Group	Principals	13	17.00	6.770	1.878
		Teachers	169	19.75	6.987	.537
Oppositional	Group	Principals	13	18.69	4.404	1.222
		Teachers	169	18.63	5.088	.391
Power	Group	Principals	13	24.77	6.379	1.769
		Teachers	169	22.36	6.896	.530
Competitive	Group	Principals	13	18.38	4.992	1.385
		Teachers	169	18.28	6.707	.516
Perfectionistic	Group	Principals	13	31.38	6.850	1.900
		Teachers	169	28.66	7.364	.566

Independent Samples Test

		t-test for Equality of Means				
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Achievement	Equal variances assumed	1.913	180	.057	3.22	1.686
Self-Actualizing	Equal variances assumed	2.151	180	.033	4.21	1.956
Humanistic-Encouraging	Equal variances assumed	1.999	180	.047	3.91	1.956
Affiliative	Equal variances assumed	1.749	180	.082	3.27	1.870
Approval	Equal variances assumed	-1.020	180	.309	-2.04	1.996
Conventional	Equal variances assumed	-.582	180	.561	-1.31	2.257
Dependent	Equal variances assumed	-1.623	180	.106	-3.02	1.863
Avoidance	Equal variances assumed	-1.368	180	.173	-2.75	2.007
Oppositional	Equal variances assumed	.041	180	.968	.06	1.452
Power	Equal variances assumed	1.219	180	.224	2.41	1.975
Competitive	Equal variances assumed	.053	180	.958	.10	1.901
Perfectionistic	Equal variances assumed	1.293	180	.198	2.73	2.110

in the mean was statistically significant with $p=.033$ equal variances assumed. In the Humanistic-Encouraging construct the principals' data indicated a mean of 42.38 and the teachers mean was indicated at 38.47. The difference in the means between the principals and teachers was statistically significant $p = .047$ equal variances assumed and $t=1.999$.

The remaining two constructs in the Constructive culture reported out strong trends. In the Achievement construct the principals' data indicated a mean of 41.23 while the teachers data indicated a mean of 38.01. The difference in the means produced a strong trend with $p=.057$ and $t=1.913$ equal variances assumed. In the Affiliative construct the principals had a reported mean of 44.00 and the teachers' data indicated a mean of 40.73 and $t=1.749$. The difference in the means indicated a strong trend with $p=.082$ equal variances assumed.

Statistical significance in the differences of the means between principals and teachers was not indicated in the remaining constructs where: in the Approval construct principals indicated a mean of 24.85 and teachers indicated a mean of 26.88 with $p=.309$ and $t=-1.020$; in the Conventional construct where principals indicated a mean of 26.77 and teachers indicated a mean

of 28.08 with $p=.561$ with $t=-.582$; in the Dependent construct where principals indicated a mean of 27.54 and teachers indicated a mean of 30.56 with $p=.106$ with $t=-1.623$; in the Avoidance construct where principals indicated a mean of 17.00 and teachers indicated a mean of 19.75 with $p=.173$ and $t=-1.368$; in the Oppositional construct where principals indicated a mean of 18.69 and teachers indicated a mean of 18.63 with $p=.968$ and $t=.041$; in the Power construct where principals indicated a mean of 24.77 and teachers indicated a mean of 22.36 with a $p=.224$ and $t=1.219$; in the Competitive construct where principals indicated a mean of 18.38 and teachers indicated a mean of 18.28 with a $p=.958$ and $t=.053$, and in the Perfectionistic construct where principals indicated a mean of 31.38 and teachers indicated a mean of 28.66 with a $p=.198$ and $t=1.293$.

The data from the Independent Samples t-test run between principals and teachers suggest that within the Constructive culture constructs principals tended to rate the culture of the school and the associated potential for teacher leadership significantly higher statistically in Self-Actualizing and Humanistic-Encouraging constructs with strong trends in Achievement and Affiliative constructs, than did teachers. The data further suggest

that there was no statistically significant difference in the way the two groups rated the remaining eight constructs.

Data Analysis Summation

The data suggest that both principals and teachers in this study rated the culture of the schools highest in the four constructs that make up the Constructive culture. When gender was introduced as a variable, there was no statistically significant difference between males and females perceptions of school culture. The variable of level of education produced statistically significant differences in three of the four constructs of the Constructive culture with those participants holding a Masters Degree and above rating the school culture higher. The data suggest that the variable of age produced no statistically significant difference between groups except in the Power construct where those respondents who fell into the age range of 40-49 rated the school culture higher in Power than did those participants in the 50-59 age range.

When the data for years with the school was reported out the results suggest that those whose experience was the lowest and the highest rated the culture higher in

two of the constructs associated with the Constructive culture than did those whose experience fell in the middle. This data set also suggest that those with less experience tended to rate the culture lower in two of the Passive-Defensive constructs than did those whose experience ranged in the middle.

The data that was run on the District Factor Groups suggest that the lower DFG designation rated the culture of the school significantly lower statistically in two of the constructs associated with the Constructive culture than did those schools with higher DFG's. The data further suggest, strong trends in the remaining two constructs of the Constructive culture with the lower DFG district rating the school culture lower.

The data set that compared principals' and teachers' perceptions of school culture suggest that in the Constructive culture constructs, principals in the study rated the culture statistically significantly higher than did teachers. The data further suggest that there was no statistically significant difference in the way the two groups rated the remaining eight constructs.

CHAPTER V

Summary, Conclusions and Policy Recommendations

Introduction

This chapter reviews the problem and summarizes the data analysis of the problem and the six sub problems. It also discusses recommendations for the schools based upon the data collected and proposes topics for further research.

Statement of the problem

This study examined school culture as perceived by principals and teachers and the associated potential for teacher leadership in selected elementary schools in New Jersey.

Summary of study

Chapter I discussed the background for potential opportunities for teacher leadership as related to school culture. The purpose of the study was established and the problem was defined. Subsequently, six research questions

were established relating to organizational culture of schools and the associated potential for teacher leadership. The significance of the study was discussed, the terms were defined, and limitations of the study were presented.

Chapter II was divided into four sections that provided a synthesis of prior research germane to the study. The areas of discussion were: organizational culture; leadership; principal leadership and school culture; and, teacher leadership/empowerment and school culture. The review of the literature provided support for continuation of the study regarding the impact school culture has upon the associated potential for teacher leadership.

Chapter III explained the methodology of the study. This included the research design; the subjects in the population surveyed; the collection of the data; and, a description of the instrument. The instrument used in this study was the Organizational Culture Inventory® Human Synergistics International that consists of 120 items that describe behaviors and personal styles that organizations might expect or require of their members. The inventory is a Likert type scale response form with respondents indicating the extent to which a statement

applies to the culture of an organization at the specific time and ranges from (1) not at all; (2) to a slight extent; (3) to a moderate extent; (4) to a great extent; and, (5) to a very great extent.

It is a self-reporting paper pencil instrument designed to assess twelve sets of normative beliefs and shared behavioral expectations delineated by two core dimensions. The first dimension addresses a concern for task as opposed to a concern for people; and, the second dimension addresses higher order personal fulfillment as opposed to security needs (Cooke & Szumal, 1993). Chapter III also included the proposed data analysis for each of the sub problems.

Chapter IV provided the analysis of the data using descriptive and inferential statistics. Demographic information was provided. The analysis was presented in narrative form with detailed tables for each of the sub problems.

Summary of data

1. What effect does gender have upon principals' and teachers' perception of school culture and the associated potential for teacher leadership?

In the independent samples t-test that was run on the data there was no statistically significant difference in the way males and females in the study viewed to culture of the schools and the associated potential for teacher leadership. This supports the doctoral research completed by Grant (1996) and Martchink (1997).

2. What effect does educational level have upon principals' and teachers' perception of school culture and the associated potential for teacher leadership?

The results of the t-test on educational level suggest that in three of the four constructs associated with the potential for teacher leadership, those with a Masters degree and above rated the culture of the school significantly higher statistically than those respondents whose educational level was below a Masters. This information is significant in that there is little if any research found linking level of education and perception of school culture.

3. What effect does age have upon principals' and teachers' perception of school culture and the associated potential for teacher leadership?

The results of the ANOVA run on age suggests that there is no statistically significant difference between age

groups and the respondents' perceptions of school culture and the associated potential for teacher leadership except in the Power construct. There the data suggests that there is a statistically significant difference between those respondents who ranged in age from 40-49 and 50-59 with those in the 40-49 age range indicating a higher response in the area of Power.

4. What effect do years with the school district have upon principals' and teachers' perception of school culture and the associated potential for teacher leadership?

The results from the ANOVA suggest that in two of the constructs associated with Constructive Culture, Self-Actualizing and Humanistic-Encouraging, there was a statistically significant difference between those with less experience (1 to 2 years) and greatest experience (< 15 years) both of whom tended to rate the culture higher in these two areas and those teachers and principals whose experience was either 4 to 6 years or 10 to 15 years. The data also suggest that in two of the constructs associated with a Passive-Defensive culture, Dependent and Conventional, there was a statistically significant difference between those with less experience (2 to 4 years) and those with experience in the range of

6 to 10 years where those respondents who had less experience with the organization rated the culture lower in the dependent and conventional constructs. This data contradicts the findings of the doctoral research done by Grant (1996) and Marchink (1997) who both found no statistically significant difference in the years with the school and the perception of school culture.

5. What effect does a school district's District Factor Grouping have upon principals' and teachers' perception of school culture and the associated potential for teacher leadership?

The data from the ANOVA test suggest that the lowest District Factor Group CD rated the culture of the school significantly lower statistically in the Self-Actualizing and Affiliative constructs than did those districts that fell into the DE and FG groupings. The data also indicate that there was a strong trend in the difference in the way the CD factor group rated the school culture in the Humanistic-Encouraging and Achievement constructs as opposed to the FG factor group with the CD group rating the school culture lower in those constructs that are part of the Constructive culture. The data also suggest that the CD group rated the school culture higher in the Perfectionistic construct than did the FG factor group.

This information is significant in that there is little if any research found linking District Factor Grouping in New Jersey and perception of school culture.

6. Is there a statistically significant difference in the perceptions of principals and teachers as to the organizational culture of schools?

The data from the Independent Samples t-test run between principals and teachers suggest that in the Constructive culture constructs of Self-Actualizing and Humanistic-Encouraging principals rated the culture of the school and the associated potential for teacher leadership significantly higher statistically than did teachers. The data also indicted strong trends in the Achievement and Affiliative constructs. The data further suggest that there was no statistically significant difference in the way the two groups rated the remaining eight constructs.

Conclusions

The data suggest that both principals and teachers in this study rated the culture of the schools highest in the four constructs that make up the Constructive culture. When gender was introduced as a variable, there was no statistically significant difference between males and females perceptions of school culture. The variable

of level of education produced statistically significant differences in three of the four constructs of the Constructive culture with those participants holding a Masters Degree and above rating the school culture higher. The data suggest that the variable of age produced no statistically significant difference between groups except in the Power construct.

When the data for years with the school was reported the results suggest that those whose experience was the lowest and the highest rated the culture higher in two of the constructs associated with the Constructive culture than did those whose experience fell in the middle. The data that was run on the District Factor Groups suggest that the lower District Factor Groupings rated the culture of the school significantly lower statistically in two of the constructs associated with the Constructive culture with strong lower trends in the remaining two constructs of the Constructive culture.

The data that compared principals' and teachers' perceptions of school culture suggest that in the Constructive culture constructs, principals in the study rated the culture statistically significantly higher than did teachers. The data further suggest that there was no

statistically significant difference in the way the two groups rated the remaining eight constructs.

Overall the data suggest that principals and teachers both rated the Constructive culture higher than the other constructs. In such a culture there is the potential for teacher leadership opportunities. Fairholm (1994) supports this suggestion when he posits that people experience greatest growth in cultures that support interpersonal values. The research of Cunningham and Gresso (1993) also supports the influence of culture on the associated potential for teacher leadership when they hypothesize that the culture influences opportunities for empowerment and teacher leadership. In organizational cultures that promote self-development and intrinsic motivation, the opportunity exists for shared leadership. Effective organizational cultures encourage people to develop their talents.

Recommendations for school policy

The literature and the data that was analyzed support the following recommendations:

1. Those constructs in the Constructive culture were rated higher than the other constructs by both principals and teachers. It is recommended that the

schools capitalize on this perception of school culture for the potential for teachers' leadership and put into place opportunities for staff to take leadership roles within the school and the district. This might be achieved through goal setting opportunities for teachers and by principals reinforcing the attainment of the teachers' goals.

2. The Perfectionistic construct was rated higher by principals than teachers as being characteristic of the school culture. It is recommended that schools examine the impact of the difference in the perception of the culture relating to the Perfectionistic construct. Principals need to reflect on whether the school culture emphasizes not making mistakes and accomplishing all tasks with perfection. If this is so, a principal who believes that only she/he is able to handle the job may diminish the opportunity for teacher leadership.
3. Linked to number two above is the data that points to teachers rating school culture higher in the dependent construct which is characterized by accepting goals set by others and being a good follower. It is recommended that principals determine whether positive reinforcement goes to

teachers who are conventional and who follow orders. If this proves to be valid then it is further recommended that innovation and taking risks are given positive reinforcement. This support by the principal will allow teachers to set inventive goals in a culture that supports opportunities for teacher leadership.

4. The final recommendation for the schools is significant as in the constructive culture, where potential opportunities for leadership exists, there was a statistically significant difference and strong trends that indicated principals rated the constructive culture higher than teachers. It is recommended that principals examine the difference in the perception of the culture through meetings with staff members. The results of these meetings should be discussed and, jointly with teachers, changes implemented that would bring more opportunities for teacher leadership in the schools and districts.

Recommendations for further study

Areas for further research might consist of the following:

1. This study focused on teachers and principals in elementary schools in one New Jersey county and their perceptions of school culture and the associated potential for teacher leadership. It would add to the body of research if a study were conducted statewide. This information would broaden the knowledge base of organizational culture of schools in New Jersey.
2. In the limitations of the study it was noted that the research would take place in elementary schools only. Further research in middle and high schools would make available data on the perception of school culture on the secondary level. This type of study would provide statistical information to determine if there are significant differences between elementary and secondary principals' and teachers' perception of school culture.
3. A study employing interviews would provide in depth information on teachers' and principals' perceptions of the opportunity for teacher leadership. It is suggested that the research act as an extension of

this current study to determine if associated potential for teacher leadership is linked to actual opportunities for teacher leadership.

4. An important part of the organizational culture of the school is the principals' perceptions of that culture and the associated opportunities for teacher leadership. The number of principals who participated in the research was not robust (13). It is suggested that the current study be replicated to include a larger population of principal respondents.
5. The study included districts in a suburban setting. It is suggested that research be conducted in urban and rural areas to examine school culture and the associated potential for teacher leadership.
6. Further study is suggested of schools in the lowest (A) and highest (J) District Factor Groups to obtain data to determine if there is a significant difference between the two DFG's in teachers' and principals' perception of school culture and the associated potential for teacher leadership. The current study was limited to the middle DFG's of CD, DE, FG, and GH.

References

- Argyris, C. (1964). *Intergrating the individual and the organization*. New York: Wiley.
- Ash, R. C., & Persall, J. M. (2000). The principal as chief learning officer: Developing teacher leaders. *NASSP Bulletin*, 84(616), 15-20.
- Aycan, Z., Kanungo, R. N., & Sinha, J. B. P. (1999). Organizational culture and human resource management practices: The model of culture fit. *Journal of Cross-Cultural Psychology*, 30(4), 501-526.
- Babbie, E. (1999). *The basics of social research*. Belmont, CA: Wadsworth.
- Bagraim, J. J. (2001). Organisational psychology and workplace control: The instrumentality of corporate culture. *South African Journal of Psychology*, 31(3), 43-49.
- Barth, R. (1990). *Improving schools from within*. San Francisco: Jossey-Bass.
- Barth, R. (2001). Teacher leader. *Phi Delta Kappan*, 82(6), 443-450.
- Bates, R. J. (1984). Toward a critical practice of educational administration. In T. J. Sergiovanni, & J. E. Corbally, *Leadership and organizational culture: New perspectives on administrative theory and practice*. Chicago: University of Illinois Press.
- Batteau, A. W. (2000). Negations and ambiguities in the culture of organizations. *American Anthropologist*, 102(4), 726-740.
- Bennis, W., & Nanus, B. (1985). *Leaders: The strategies for taking charge*. New York: Harper & Row.
- Bennis, W. (1989). *On becoming a leader*. Reading, MA: Addison Wesley Publishing Company.

- Blasé, J., & Anderson, G. (1995). *The micropolitics of educational leadership: From control to empowerment*. New York: Teachers College Press.
- Blasé, J., & Blasé, J. (1997). *The fire is back*. Thousand Oaks, CA: Corwin Press.
- Blasé, J., & Kirby, P. C. (1992). *Bringing out the best in teachers*. Newberry Park, CA: Corwin Press.
- Bolman, L. G., & Deal, T. E. (1991). *Reframing organizations: Artistry, choice, and leadership*. (1st ed.) San Francisco: Jossey-Bass.
- Bolman, L. G., & Deal, T. E. (1995). *Leading with soul*. San Francisco: Jossey-Bass.
- Bolman, L. G., & Deal, T. E. (1997). *Reframing organizations: Artistry, choice, and leadership*. (2nd ed.) San Francisco: Jossey-Bass.
- Buckner, K. G., & McDowelle, J. O. (2000). Developing teacher leaders: Providing encouragement, opportunities, and support. *NASSP Bulletin*, 84(616), 35-41.
- Carlson, R. V. (1996). *Perspectives on organization, leadership, and school change*. New York: Longman Publishers.
- Childs-Bowen, D., Moller, G., & Scrivner, J. (2000). Principals: Leaders of leaders. *NASSP Bulletin*, 84(616), 27-34.
- Combs, A. W., Miser, A. B., & Whitaker, K. S. (1999). *On becoming a school leader*. Alexandria, VA: ASCD.
- Cooke, R. A., & Lafferty, J. C. (1983, 1986, 1987, 1989) *Organizational Culture Inventory*, Plymouth, MI: Human Synergistics.
- Cooke, R. A., & Szumal, J. L. (1993). Measuring normative beliefs and shared behavioral expectations in organizations: The reliability and validity of the organizational culture inventory. *Psychological Reports*, 72, 1299-1330.

- Cooke, R. A., & Szumal, J. L. (2000). *Handbook of organizational culture and climate*. Newbury Park, CA: Sage Publications.
- Cranston, N. C. (2000). Teachers as leaders: A critical agenda for the new millennium. *Asia-Pacific Journal of Teacher Education*, 28(2), 123-131.
- Cunningham, W. G., & Gresso, D. W. (1993). *Cultural leadership: The culture of excellence in education*. Needham Heights, MA: Allyn Bacon.
- Day, C., Harris, A., & Hadfield, M. (2001). Challenging the orthodoxy of effective school leadership. *International Journal of Leadership in Education*, 4(1), 39-56.
- Deal, T. E. (1985). The symbolism of effective schools. *Elementary School Journal*, 5, 601-619.
- Deal, T. E. (1993). The culture of schools. In M. Sashkin & H. T. Wallberg (Eds.), *Educational leadership and school culture* (pp. 3-18). Berkley, CA: Mc Cutchan Publishing Corporation.
- Deal, T. E., & Kennedy, A. (1982) *Corporate cultures: The rites and rituals of corporate life*. Reading, MA: Addison-Wesley.
- Deal, T. E., & Peterson, K. D. (1990). The principal's role in shaping school culture. (DOE Publication No. ED 325-914). Washington, DC: U.S. Government Printing Office.
- Deal, T. E., & Peterson, K. D. (1993). Strategies for building school cultures: Principals as symbolic leaders. In M. Sashkin & H. T. Wallberg (Eds.), *Educational leadership and school culture* (pp. 89-99). Berkley, CA: Mc Cutchan Publishing Corporation.
- Deal, T. E., & Peterson, K. D. (1999). *Shaping school culture: The heart of leadership*. San Francisco: Jossey-Bass.

- Duke, D. L. (1998). The normative context of organizational leadership. *Educational Administrative Quarterly*, 34(2), 165-195.
- Fairholm, G. W. (1994). *Leadership and the culture of trust*. Westport, CN: Praeger Publishers.
- Fiore, D. (2000). Positive school cultures: The importance of visible leaders. *Contemporary Education*, 71(2), 11-13.
- Firestone, W., & Wilson, W. L. (1993). Bureaucratic and cultural linkages: Implications for the principal. In M. Sashkin & H. T. Wallberg (Eds.), *Educational leadership and school culture*. (pp. 19-39). Berkley, CA: Mc Cutchan Publishing Corporation.
- Fullan, M., (1994). Teacher leadership: A failure to conceptualize. In D. R. Walling, (Ed.), *Teachers as leaders: Perspectives on the professional development of teachers*. (pp. 241-253). Bloomington, IN: Phi Delta Kappa Educational Foundation.
- Gardner, H. (1999). The vehicle and vehicles of leadership. *American Behavioral Scientist*, 42(6), 1009-1023.
- Gehrke, N. J., & Romerdahl, N. S. (1997). *Teacher leaders: Making a difference in schools*. West Lafayette, IN: Kappa Delta Pi.
- Grant, B. A. (1996). Transformational leadership of principals in a mid-size school district in Colorado. (Doctoral dissertation, Colorado State University, 1996). *Dissertation Abstracts International A 57/07*. AAT 9638682.
- Heifetz, R. A. (1994). *Leadership without easy answers*. Cambridge, MA: Belknap Press.
- Hinkle, D. E., Wiersma, W. & Jurs, S. G, (1998). *Applied statistics for the behavioral sciences* (4th ed.). Boston: Houghton Mifflin Company.

- Hoy, W. K. & Sweetland, S. R. (2000) School characteristics and educational outcomes: Toward an organizational model of student achievement in middle schools. *Educational Administration Quarterly*, 36(5), 703-729.
- Hsieh, C. L., & Shen, J. (1998). Teachers', principals' and superintendents' conceptions of leadership. *School Leadership and Management*, 18(1), 107-122.
- Hughes, L. W. (1994). The leader: Artist? Architect? Commissar? In L. W. Hughes, (Ed.) *The principal as leader* (pp.5-27). New York: Merrill.
- Hunt, J. G. (1991). *Leadership: A new synthesis*. Newbury Park, CA: Sage Publications.
- Klein, S. R., & Diket, R. M. (1999). Creating artful leadership. *International Journal of Leadership in Education*, 2(1), 23-30.
- Lambert, L. (1998). *Building leadership capacity in schools*. Alexandria, VA: ASCD.
- Lambert, L., Walker, D., Zimmerman, D. P., Cooper, J. E., Lambert, M. D., Gardner, M. E., & Slack, P. J. F. (1995). *The constructivist leader*. New York: Teachers College Press.
- Leedy, P. D., (1997). *Practical research: Planning and design*. Upper Saddle River, NJ: Prentice-Hall.
- Leithwood, K. (1992). Transformational leadership: Where does it stand?. *Education Digest* 58(3) 17-20.
- Liberman, A., Saxl, E. R., & Miles, M. B. (1988). Teacher leadership: Ideological practice. In A. Liberman (Ed.). *Building a professional culture in schools*. (pp. 148-166). New York: Teachers College Press.
- Little, J. W. (1988). Assessing the prospect for teacher leadership. In A. Liberman (Ed.), *Building a professional culture in schools*. (pp. 78-106). New York: Teachers College Press.

- Maher, M., & Burke, R. (1993) Transforming school culture. In M. Sashkin & H. T. Wallberg (Eds.), *Educational leadership and school culture*. (pp. 40-57). Berkley, CA: Mc Cutchan Publishing Corporation.
- Martchink, C. C. (1997). Characteristics of an effective elementary principal as perceived by all staff members. (Saint Louis University, 1997). *Dissertation Abstracts International A 58/08*. AAT 9803795.
- Meek, V. L. (1988). Organizational culture: Origins and weaknesses. *Organization Studies*, 9(4), 453-473.
- Moran, E. T., & Volkwein, J. F. (1992). The cultural approach to the formation of organizational climate. *Human Relations*, 45(1), 19-38.
- Neuman, M. (2000). Leadership for student learning. *Phi Delta Kappan* 82(1), 9-12.
- New Jersey Department of Education web site. District factor group indicators of socioeconomic status. Retrieved February 11, 2001, from <http://www.state.nj.us/njded/schools/achievement/dfg.htm>
- New Jersey Department of Education web site. District factor grouping system. Retrieved February 11, 2001, from <http://www.state.nj.us/njed/finance/sfgdesc.doc>.
- New Jersey Department of Education web site. Main web site. Retrieved February 11, 2001, from <http://www.state.nj.us/education>.
- Parry, K. (2000). Does your corporate culture build leaders? *Management* 47(4), 36-38.
- Patterson, J. L. (1993). *Leadership for tomorrows schools*. Alexandria VA: ASCD.
- Peterson, K. D., & Deal, T. E. (1998). How leaders influence the culture of schools. *Educational Leadership*, 56(1), 28-30.
- Romanish, B. (1991). *Empowering teachers: Restructuring schools for the 21st century*. Lanham, MD: University Press America, Inc.

- Rost, J. C. (1993). *Leadership for the 21st century*. Westport, CN: Praeger Publishing.
- Sashkin, M., & Sashkin, M. G., (1993). Principals and their school cultures: Understandings from quantitative and qualitative research. In M. Sashkin & H. T. Wallberg (Eds.), *Educational leadership and school culture* (pp. 100-123). Berkley, CA: Mc Cutchan Publishing Corporation.
- Schein, E. H. (1985). *Organizational culture and leadership* (1st ed.) San Francisco: Jossey-Bass.
- Schein, E. H. (1992). *Organizational culture and leadership* (2nd ed.) San Francisco: Jossey-Bass.
- Schlechty, P. C. (1990). *Schools for the 21st century*. San Francisco: Jossey-Bass.
- Senge, P. (1990). *The fifth discipline*. New York: Doubleday.
- Sergiovanni, T. J. (1992). *Moral leadership*. San Francisco: Jossey-Bass.
- Sergiovanni, T. J. (1994). *Building community in schools*. San Francisco: Jossey-Bass.
- Sergiovanni, T. J. (1996). *Leadership for the schoolhouse*. San Francisco: Jossey-Bass.
- Sergiovanni, T. J. (2000). *The lifeworld of leadership*. San Francisco: Jossey-Bass.
- Sergiovanni, T. J., & Corbally, J. E. (1984). *Leadership and organizational culture: New perspectives on administrative theory and practice*. Chicago: University of Illinois Press.
- Sergiovanni, T. J., & Starratt, R. J. (1988). *Supervision: Human perspectives*. New York: McGraw-Hill.
- Simms, R. R. (2000). Changing an organization's culture under new leadership. *Journal of Business Ethics*, 25 (1) 65-78.

- Sinclair, A. (1993). Approaches to organisational culture and ethics. *Journal of Business Ethics*, 12, 63-73.
- Strati, A. (1998). Organizational symbolism as a social construction: A perspective from the sociology of knowledge. *Human Relations*, 51(11), 1379-1402.
- Szumal, J. L., (1998). *Organizational culture inventory® interpretation & development guide*. Plymouth, MI: Source Publishing, LLC.
- United States Census Bureau. State and county quick facts. Retrieved March 8, 2001 from <http://quickfacts.census.gov/qfd/index.html>.
- United States Census Bureau. Mapping and cartographic resources. Retrieved March 8, 2001 from <http://homer.ssd.census.gov/>.
- Urbanski, A., & Nickolaou, M. B. (1997). Reflections on teachers as leaders. *Educational Policy*, 11(2), 243-254.
- Vasquez-Levy, D., & Timmerman, M.A. (2000). Beyond the classroom: Connecting and empowering teachers as leaders. *Teaching and Change*, 7(4), 363-371.
- Weiss, K. R., & Holland, P. E. (1994). The principal and novice teachers. In L. Hughes (Ed.), *The principal as leader* (pp. 215-249). New York: MacMillan College Publishing Company.
- Witte, R. S. & Witte, J. S. (1997) *Statistics*. (5th ed.). New York: Harcourt Brace College Publishers.
- Wildy, H., & Loudon, W. (2000). School restructuring and the dilemmas of principals' work. *Educational Management & Administration*, 28(2), 173-184.
- Wren, D. J. (1999). School culture: Exploring the hidden curriculum. *Adolescence*, 34(135), 593-596.
- Yukl, G. (1998). *Leadership in organizations*. (4th ed.). Upper Saddle River, NJ: Prentice Hall.

Appendix A

Figure 1 OCI Circumplex

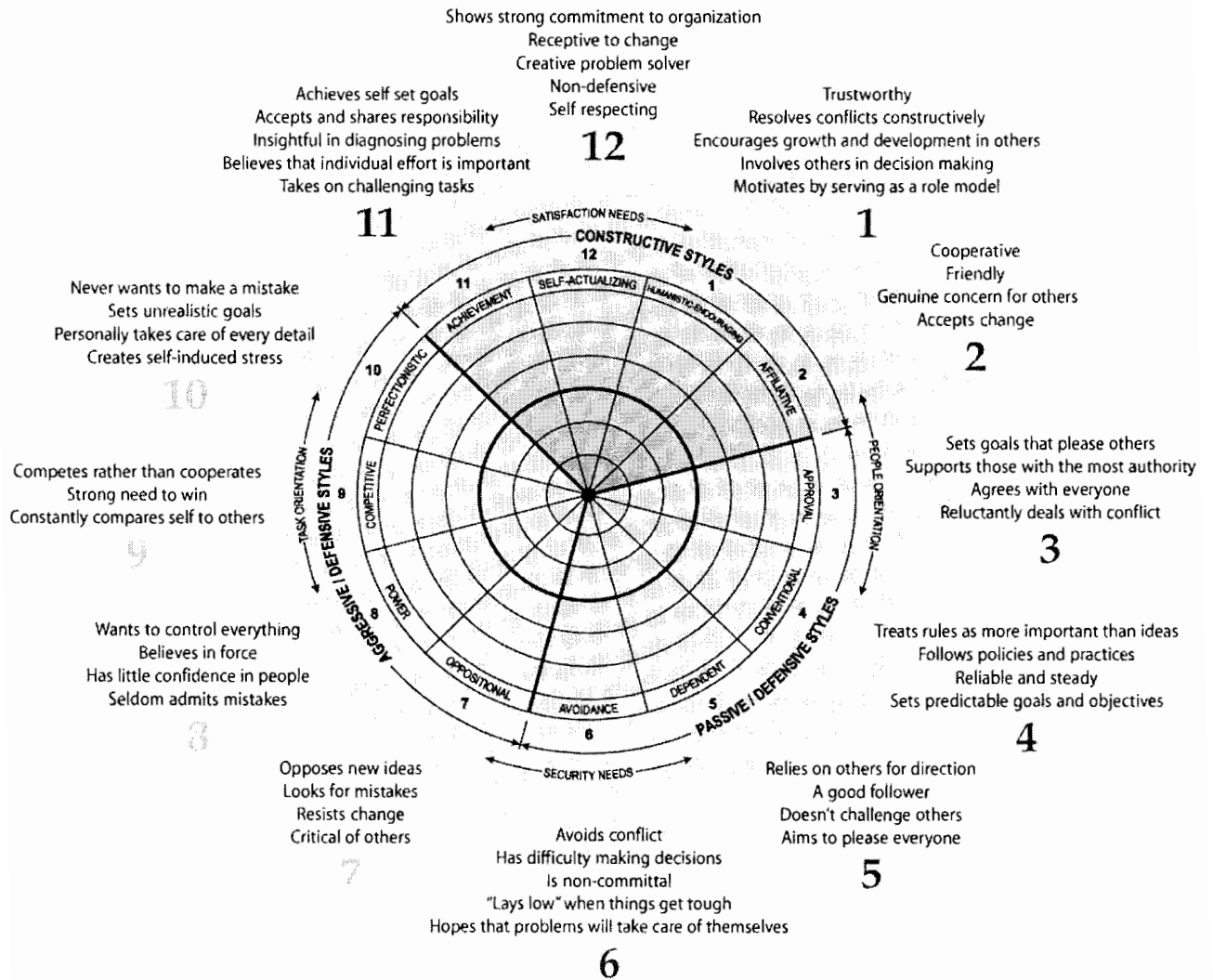


Figure 1. The *Organizational Culture Inventory (OCI) Circumplex* allows an organization to profile its score against a normed score. From *Organizational Culture Inventory* by R.A. Cooke and J.C. Lafferty, 1983, 1986, 1987, 1989, Plymouth, MI: Human Synergistics. Copyright 1989 by Human Synergistics, Inc. Adapted by permission

Appendix B

Letters to Superintendents

806 Grove Street
Point Pleasant Beach, New Jersey
08742

July 18, 2001

Dear Superintendent:

I am a doctoral student in Educational Administration at Seton Hall University and am presently working on my dissertation. I am requesting permission from you to survey your elementary school principal(s) and full time teachers. They will be asked to respond to the Organizational Culture Inventory® Human Synergistics International.

If permission is granted to contact the principal(s) and teachers, no individual, school, or school district will be identified at any time and all responses will be held in strictest confidence. **Participants maintain the right not to participate and to withdraw from the study at any time without prejudice.** I would also be happy to provide you with a copy of the aggregate results of this study upon its completion if you desire.

Please indicate your decision to participate by forwarding a letter of permission in the stamped self addressed envelope provided. I would greatly appreciate a return within the next two weeks so that I might begin the fieldwork. I am available to meet or speak with you at your request concerning any aspects of this study.

The Seton Hall University Institutional Review Board has reviewed this project for Human Subjects Research. The IRB believes that the research procedures adequately safeguard the subject's privacy, welfare, civil liberties, and rights. The Chairperson of the IRB may be reached through the Office of Grants and Research Services. The telephone number of the office is (973) 275-2974.

Thank you for your consideration of this request and anticipated participation. If you have any questions, I can be reached at 732-892-3125 during the evening or at the Middletown Township School District Administration Building, at 732-671-3850 Ext. 1025 during the day.

Sincerely,

Nancy B. Whelan

806 Grove Street
Point Pleasant Beach, New Jersey
08742

July 16, 2001

Dear Superintendent/Principal:

I am a doctoral student in Educational Administration at Seton Hall University and am presently working on my dissertation. I am requesting permission from you to contact your elementary school teachers and yourself. You and they will be asked to respond to the Organizational Culture Inventory® Human Synergistics International survey.

If permission is granted to contact the teachers and yourself, no individual, school, or school district will be identified at any time and all responses will be held in strictest confidence. **Participants maintain the right not to participate and to withdraw from the study at any time without prejudice.** I would also be happy to provide you with a copy of the aggregate results of this study upon its completion if you desire.

Please indicate your decision to participate by forwarding a letter of permission in the stamped self addressed envelope provided. I would greatly appreciate a return within the next two weeks so that I might begin the fieldwork. I am available to meet or speak with you at your request concerning any aspects of this study.

The Seton Hall University Institutional Review Board has reviewed this project for Human Subjects Research. The IRB believes that the research procedures adequately safeguard the subject's privacy, welfare, civil liberties, and rights. The Chairperson of the IRB may be reached through the Office of Grants and Research Services. The telephone number of the office is (973) 275-2974.

Thank you for your consideration of this request and anticipated cooperation. If you have any questions, I can be reached at 732-892-3125 during the evening or at the Middletown Township School District Administration Building, at 732-671-3850 Ext. 1025 during the day.

Sincerely,

Nancy B. Whelan

Appendix C

Letter to Teachers

January, 2002

Dear Staff Member:

I am a doctoral student in the School of Education and Human Services at Seton Hall University, South Orange, New Jersey, and would like to invite you to participate in a research project. The study will analyze the perceptions of teachers for leadership opportunities as related to the culture of the school. Permission for this study was secured from your superintendent.

I would greatly appreciate your response to the attached survey: The Organizational Culture Inventory® Human Synergistics International. The survey takes approximately 15 minutes to complete.

Demographic information taken on the survey and as part of the interviews will not be used to identify the involved subjects but is critical to the comparisons to be made when results are analyzed. All survey materials will be stored in a locked cabinet at the researcher's office building.

PLEASE BE ASSURED THAT YOUR RESPONSES WILL BE HELD IN STRICTEST CONFIDENCE, AND THE DATA APPEAR IN STATISTICAL FORM ONLY. YOU HAVE THE RIGHT NOT TO PARTICIPATE AND TO WITHDRAW FROM THIS STUDY AT ANY TIME WITHOUT PREJUDICE.

Please return the survey, whether it is completed or not in the stamped envelope provided. Your completion and return of this questionnaire indicates your understanding of the project and your willingness to participate.

The return date of all surveys, completed or not, is February 15, 2002

This project has been reviewed and approved by the Seton Hall University Institutional Review Board for Human Subjects Research. The IRB believes that the research procedures adequately safeguard the subject's privacy, welfare, civil liberties, and rights. The Chairperson of the IRB may be reached through the Office of Grants and Research Services. The telephone number of the office is (973) 275-2974.

Thank you very much for your anticipated participation in this important study. If you have any questions, I may be reached at the Middletown Township School District at 732-671-3850 Ext. 1025.

Sincerely,

Nancy B. Whelan

Appendix D
Letter to Principals

January, 2002

Dear Principal:

I am a doctoral student in Educational Administration at Seton Hall University and am presently working on my dissertation. This letter is to request your participation in a survey, regarding perceptions for leadership opportunities for teachers as related to the organizational culture of the school. Permission to complete this study was secured from your Superintendent

Enclosed you will find the Organizational Culture Inventory Survey © Human Synergistics International which should only take about fifteen minutes to complete. The teachers in your school will also be requested to participate in this study. Kindly place the completed survey in the stamped self addressed envelope provided. Completion and return of the survey will indicate your understanding of the project and willingness to participate.

Demographic information taken on the survey will not be used to identify the involved subjects but is critical to the comparisons to be made when results are analyzed. All survey materials will be stored in a locked cabinet at the researcher's office building.

All responses will be confidential. No individual, school, or school district will be identified at any time. **Participants maintain the right not to participate and to withdraw from the study at any time without prejudice.** I would also be happy to provide you with a copy of the aggregate results of this study upon its completion if you desire. **The return date of all surveys, completed or not, is February 15, 2002**

This project has been reviewed and approved by the Seton Hall University Institutional Review Board for Human Subjects Research. The IRB believes that the research procedures adequately safeguard the subject's privacy, welfare, civil liberties, and rights. The Chairperson of the IRB may be reached through the Office of Grants and Research Services. The telephone number of the office is (973) 275-2974.

Thank you for your anticipated cooperation. If you have any questions, I can be reached at the Middletown Township School District Administration Building, at 732-671-3850 Ext. 1025.

Sincerely,

Nancy B. Whelan

Appendix E

Human Synergistics Permission Letter



180
39819 Plymouth Road C8020
Plymouth, Michigan 48170-8020
tel 800.622.7584 734.459.1030
fax 734.459.5557
web www.humansyn.com
e-mail info@humansyn.com

April 24, 2002

Nancy B. Whelan
806 Grove Street
Point Pleasant Beach, NJ 08742-2414

Dear Ms. Whelan:

I am pleased to grant you permission to reproduce the *Organizational Culture Inventory* (OCI) circumplex and style descriptions in your dissertation: *A STUDY OF THE PERCEIVED LEADERSHIP OPPORTUNITIES FOR TEACHERS AS RELATED TO THE ORGANIZATIONAL CULTURE OF THE SCHOOL AS INDICATED BY THE PRINCIPALS AND TEACHERS IN SELECTED PUBLIC ELEMENTARY SCHOOLS IN NEW JERSEY.*

The following citation must be included in your manuscript where the OCI circumplex is displayed: "Copyright 1987, 1994 by Human Synergistics Int. Reproduced by permission."

The following citation must be included in your manuscript where the OCI style descriptions are discussed or reproduced: "From *Organizational Culture Inventory* by R.A. Cooke and J.C. Lafferty, 1983, 1986, 1987, 1989, Plymouth, MI: Human Synergistics. Copyright 1989 by Human Synergistics, Int. Adapted by permission."

We look forward to receiving a copy of your dissertation upon completion.

Sincerely,

A handwritten signature in cursive script that reads "Cheryl A. Boglarsky Ph.D." The signature is written in black ink and is positioned above the typed name.

Cheryl A. Boglarsky, Ph.D.
Director of Research
Human Synergistics Int.

Cc: Debby Defranco; Robert A. Cooke