

A NETWORK ANALYSIS PERSPECTIVE OF THE
RELATIONSHIPS AMONG MEMBERS OF THE
OKLAHOMA AREA VOCATIONAL-
TECHNICAL SCHOOL
SUPERINTENDENTS
ASSOCIATION

By

DOUGLAS RAY MAJOR

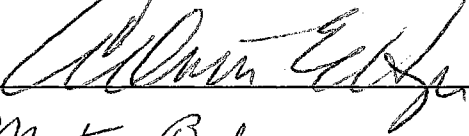
Bachelor of Science
Oklahoma State University
Stillwater, Oklahoma
1985

Master of Science
Oklahoma State University
Stillwater, Oklahoma
1991

Submitted to the Faculty of the Graduate College of the
Oklahoma State University in partial fulfillment
of the requirements for the Degree of
DOCTOR OF EDUCATION
July, 1999

A NETWORK ANALYSIS PERSPECTIVE OF THE
RELATIONSHIPS AMONG MEMBERS OF THE
OKLAHOMA AREA VOCATIONAL-
TECHNICAL SCHOOL
SUPERINTENDENTS
ASSOCIATION

Thesis Approved.



Martin Bentley

L. Ann Restone

Gary R. Bue

Wayne B. Powell

Dean of the Graduate College

ACKNOWLEDGEMENTS

I would like to express my gratitude to my family and friends who have shown their support and encouragement of me throughout this project. A special thank you goes to my wife Sandy and our children, Phillip, Sarah, Marc, and Guy Austin for understanding and encouraging me to continue my education. For all of the nights I spent in class and studying, I will repay...I now dedicate my time to you.

I would also like to thank Dr. Adrienne Hyle for her assistance, cooperation, and encouragement while serving as my adviser. You have a special gift of insight and encouragement. Thank you for using your talents to enhance my education. To my committee, Dr. Burlingame, Dr. Restine, and Dr. Bice, thank you for dedicating your time and your commitment to students. Without you, the process loses meaning.

To the members of the AVTS Superintendents Association (Spring 1999), thank you for your assistance and input which allowed this study to be completed. A special thank you goes to Dr. Fred Shultz and Ken Phelps for providing input and direction on the history and development of the system and for the leadership role you have played.

And finally, thank you to my parents, Charolette Major and Guy and Lanita Southall for always believing in me and to Dr. Fred Shultz for serving as a mentor in my development.

TABLE OF CONTENTS

Chapter	Page
I. DESIGN OF THE STUDY	1
Statement of the Problem.....	5
Purpose of the Study	7
Theoretical Framework.....	8
Network Analysis	8
Perpetuation Theory.....	10
Procedures.....	12
Researcher	12
Data Needs and Sources	13
Data Collection.....	14
Data Analysis	15
Research Criteria	16
Significance of the Study	18
Theory	18
Research	18
Practice	19
Summary	19
Reporting.....	19
II. REVIEW OF THE LITERATURE.....	20
Area School Delivery System.....	20
Network Analysis.....	22
Perpetuation Theory	28
Summary	31
III. DATA PRESENTATION.....	33
Case Study Procedures.....	33
Survey Data.....	34
Interview Data.....	44
Reciprocity	48
Intensity	49
Time.....	50
Intimacy.....	51
Future.....	52
Summary	54

IV. ANALYSIS OF THE DATA.....	55
Demographic Data	55
Sociogram	56
Work Experience.....	56
Summary	58
Interview Data.....	59
Time.....	59
Intensity.....	60
Intimacy.....	61
Reciprocity	62
Sociometric Choices	63
Summary	64
V. SUMMARY, CONCLUSIONS, RECOMMENDATIONS IMPLICATIONS, AND COMMENTARY	67
Summary of the Study	67
Purpose	67
Data Needs and Sources	68
Data Collection.....	68
Data Organization and Interpretation	69
Data Analysis	70
Summary of Findings.....	70
Description of Ties	71
Network Analysis and Perpetuation Theory.....	73
Future of the Organization	74
Areas for Further Study.....	75
Implications and Recommendations	76
Theory	76
Research	77
Practice	77
Commentary.....	77

LIST OF TABLES

Table	Page
I. Demographic Data Concerning Educational Level And Years Of School Administrative Experience.....	36
II. Total Number Of Selections Received By AVTS Superintendents Association Members.....	39
III. Selections Received By AVTS Superintendents Association Members—Rank Order.....	40
IV. Selections Received By AVTS Superintendents Association Members And Corresponding Work Experience.....	41
V. Educational Level And Work Experience Among Members Of Identified Sociometric Characteristics.....	45
VI. Summary Of Interviewee’s And Member(s) Referenced Work Experience And Rank Of Choices Received	47

LIST OF FIGURES

Figure	Page
1. Sociogram Depicting Mutual Choices And Identified Characteristics.....	43

CHAPTER I

DESIGN OF THE STUDY

The state of Oklahoma has three distinct and separate educational systems: common education, higher education and vocational education. Each system evolved as a means to meet unique and distinct educational needs of the citizens of the state. In general terms, the role of common education was to meet the primary academic needs of Oklahoma's students in pre-kindergarten through twelfth grade. The role of higher education was to provide undergraduate and graduate degree programs to citizens of the state. And, the role of vocational education was to meet the specific occupational training needs of citizens of the state.

Of the three, vocational education is often regarded as the "minority" system due to the fact that it is the smallest and the youngest. As the name implies, the vocational education system in Oklahoma evolved as a means of providing occupationally specific training and skills to the citizens of the state. Vocational programs have been offered through the comprehensive high schools since the early 1920's. "From those humble beginnings, the Oklahoma vo-tech system responded to the needs of an agrarian economy. Early leaders built a solid foundation of vocational agriculture and home economics programs that became national models" (Oklahoma Department of Vocational and Technical Education, 1999, p. 1). The delivery route for vocational education programs in Oklahoma changed greatly with the passage of the Federal Vocational Education Act of

1963 and Oklahoma quickly emerged as a leader in vocational education through the implementation of the Area Vocational-Technical School (AVTS) concept (Stewart, 1982).

“A phenomenon of our times in vocational education began with enactment of the Federal [Vocational Education] Act of 1963 and was later broadened. This was the area school movement” (Stewart, 1982, p. 135). Under this legislation, comprehensive school districts were given the authority to combine resources to offer a broader array of vocational courses to students through the formation of an area vocational technical school district.

The first “area” schools in Oklahoma were extensions of the local comprehensive school districts. “The first area district created under the new [Oklahoma] constitutional amendment was in Tulsa, followed by Oklahoma City, then Ardmore, Enid, and Duncan, all as a part of their respective [comprehensive] school systems” (Stewart, 1982, p. 138). Due to challenges in these school systems’ ability to adequately fund vocational programs in the area school, however, additional amendments were passed to form “super school districts” (Stewart, 1982, p. 141). This action gave the area school the authority to create a taxation district and be governed by a board of education separate from that of the comprehensive schools. As such, AVTS Boards of Education provide policy and guidance for the area school district by directing the actions of the superintendent who is hired by the board to be the executive officer of the district (Oklahoma Department of Education, 1998).

Although the primary programs at each area school were full-time programs for high school students, the growth of the system to cover a greater geographic region and

its flexibility in programming enabled it to quickly become more widely recognized for its responsiveness to the unique training needs of the adult population and business and industry throughout the state. By 1999, the area school system in Oklahoma included 29 districts and 54 campuses that served 97% of the state's population (Oklahoma Department of Vocational and Technical Education, 1999). It is this aspect that has led the vocational system in Oklahoma to be regarded as one of the premier educational systems in the world. "Each year Oklahoma hosts visitors from around the world who have identified Oklahoma as a benchmark of quality in vocational-technical education and have come to learn more about Oklahoma Vo-Tech" (Oklahoma Department of Vocational and Technical Education, 1999, p. 1).

Much of the success of the vocational system in Oklahoma can be attributed to the strength and consistency of its leadership. On the state level, to date, there have been only three state vocational directors. J.B. Perky served as the first state director and was state director at the time that the Federal Vocational Education Act was passed in 1963. In 1964, Dr. Francis Tuttle was hired and charged with enacting the provisions of this Act for Oklahoma. According to Dr. Fred Shultz, Superintendent/CEO of Meridian Technology Center, the sixteenth area school district to be formed, and previous Administrative Intern under Dr. Tuttle, "Francis Tuttle has been termed the 'father of vocational education' in Oklahoma for his work in developing the area school system" (personal communication, January 25, 1999). Dr. Tuttle's term as state director began in 1967 with the retirement of Perky (Stewart, 1982) and he continued to fine-tune and enhance the system until 1981 when he retired. Dr. Roy Peters, Jr., a former area school superintendent, followed Dr. Tuttle as state director and continued to develop the system.

In addition to state-level leadership, the superintendents of the local area vocational-technical schools also played a major role in the early development of the system. Ken Phelps, former Superintendent of Tri-County Tech in Bartlesville and one of the founding members of the Area Vocational-Technical School Superintendents Association, stated, “Early in the formation of the area school concept, the original superintendents recognized their crucial role in the building of the [vocational] system” (personal communication, January 25, 1999). The AVTS Superintendent’s Association was formed both as a support group for the few superintendents at the time and to serve as an advisory group to Dr. Tuttle. Their primary work was to build an area school delivery system that did not exist and to work together on common issues facing vocational education. Although the work of the association most directly affected area school programs, it indirectly affected all vocational offerings in the state through legislative and budgeting issues. Phelps attributes much of the success of the area school concept to Dr. Tuttle’s willingness to listen to the association and support *their* ideas.

The membership of the association is restricted to the 29 area vocational technical school superintendents who provide leadership to 54 campuses across the state of Oklahoma. Although it is an informal organization, officers are elected annually to direct the primary function of the organization: to provide leadership and guidance for the vocational system. Specifically, the association continues to act in an advisory capacity to the state director, monitors and assists in the development of legislative issues affecting vocational education, and works together to develop and implement quality training programs on a state-wide basis (F.A. Shultz, personal communication, January 25, 1999). Much of the success of Oklahoma’s area vocational-technical school system

can be directly or indirectly attributed to the leadership represented through this association.

From its small beginning, as the vocational-technical system experienced growth and matured, the composition of the association also changed. What was once a small group of individuals with similar backgrounds and experiences became a larger more diverse entity. Contributing to this change was the increased number of initial superintendents retiring and/or the leaving of the system by the initial leadership of the system. Those hired to fill these vacancies represented a broader base of experience in both education and work experience and included individuals from other educational systems as well as the private business sector (K. Phelps, personal communication, January 25, 1999).

Statement of the Problem

The early membership of the AVTS Superintendents Association represented a small, relatively stable and cohesive group. As such, the membership felt a shared sense of responsibility for working closely together to develop, implement, and guide the area vocational technical school system in Oklahoma. Through this charge, a common philosophy and purpose emerged and contributed to the success of developing a vocational delivery system separate and apart from common and higher education. As individuals, each area school superintendent represented his/her own school; as a group, however, they formed a network representing a unified system. The congruence of philosophy, governance and operation created a vision for vocational education in Oklahoma which was shared by members of the association (F.A. Shultz, personal communication, January 25, 1999). Such "strong ties" (Granovetter, 1973) formed

among the members of the early association as a result of similar backgrounds, philosophies and close working relationships, allowed for the development and maintenance of dominant cultural norms and values within the association.

Rapid growth in the number of area schools resulted from the system's success and popularity with business and industry. The membership of the association grew as the number of area schools increased. System maturity also changed the association's composition through retirements and administrative turnover. As a result of these changes, a greater diversity occurred within the membership of the AVTS Superintendent's Association in terms of member's educational backgrounds, work experiences, and tenure in the vocational system. As area vocational-technical school boards filled superintendent positions, some chose candidates from outside the area school system whose experiences were in common schools. This difference in background and experience challenged the dominant cultural and value system of the association through the introduction of "weak ties" (Granovetter, 1973) characterized as those ties between the dominant system and culturally different ones.

Although the role and purpose of the AVTS Superintendent Association remained unchanged, changing characteristics of its membership and the resulting development of weak ties increase the likelihood that a different and more varied set of perspectives within the association would emerge. Undetected, these differences of perspectives could lead to an imbalance of philosophies among the membership of the association and the formation of cliques (Luce & Perry, 1949) which would threaten the cohesiveness of the association. Lack of cohesiveness due to factors such as differences in experience, lack

of common purpose, and incongruent philosophies may result in the inability of the system to maintain its unique identity.

Network Analysis (Granovetter, 1973, 1976, 1995) and Perpetuation Theory (Braddock, 1980; McPartland & Braddock, 1981; Wells & Crain, 1994) might explain the evolution of the AVTS Superintendents Association in terms of the interaction of and support for strong and weak ties within its social system. Strong ties maintain the dominant cultural norms and values while weak ties support links between the dominant system and culturally different ones (Granovetter, 1973). The vocational-technical and common school systems are related but distinctly different cultural systems. Maintenance of the dominant vocational-technical system norms and perspectives should be the result of the predominance of the strong ties within the system, ties between vocational technical schools, not common schools; change in the system norms and perspectives should result from the predominance of weak ties within the system, ties across vocational-technical and common schools.

Purpose of the Study

Through the lenses of Network Analysis (Granovetter, 1973, 1976, 1995) and Perpetuation Theory (Braddock, 1980; McPartland & Braddock, 1981; Wells & Crain, 1994), the purpose of this study was to examine the evolution of the AVTS Superintendents Association. Specifically, the following will be done:

1. Describe the “ties” (Granovetter, 1973) that exist among members of the AVTS Superintendents Association;

2. Analyze these ties through the lenses of Network Analysis (Granovetter, 1973, 1976, 1995) and Perpetuation Theory (Braddock, 1980; McPartland & Braddock, 1981; Wells & Crain, 1994);
3. Speculate about the impact these ties will have on the future of the association;
4. Report other realities that may be revealed; and,
5. Assess the usefulness of these lenses for explaining these perspectives.

Theoretical Framework

Network Analysis (Granovetter, 1973, 1976, 1995) served as the theoretical framework for this study while Perpetuation Theory (Braddock, 1980; McPartland & Braddock, 1981; Wells & Crain, 1994) served as the conceptual framework for examining the data. Network Analysis allows the examination of relationships (ties) among members of groups for patterns of interactions or absence thereof. Perpetuation Theory then provides a useful method of examining these ties in context. Both theories were chosen as they lend themselves to the naturalistic inquiry approach and provide a useful lenses from which to examine the evolution of the association.

Network Analysis

Network Analysis is inherently an interdisciplinary endeavor. The concept developed "out of a propitious meeting of social theory and application, with formal mathematical, statistical, and computing methodology" (Wasserman & Faust, 1994, p. 10). The central concepts of relation, network, and structure were common in several social and behavioral science disciplines and pioneers of social network analysis came from sociology, social psychology and anthropology. The notion of a network of

relations linking networks of entities, or of webs or ties among social units has found wide expression throughout the social sciences (Wasserman & Faust, 1994).

A precursor to Network Analysis, Moreno's (1934) sociogram marked the beginning of sociometry: the measurement of interpersonal relations in small groups. The sociogram is useful in depicting the interpersonal structure of groups. It creates a "picture" of relationships in which people are represented as points, or nodes, and interactions are depicted by lines linking those nodes. Moreno claimed that "before the advent of sociometry no one knew what the interpersonal structure of a group 'precisely' looked like" (1953, p. lvi).

The work by Moreno led to two mainstays of social network analysis: a visual display of group structure, and a probabilistic model of structural outcomes (Wasserman & Faust, 1994). Two, and sometimes, three-dimensional representations have proven useful for presenting structures of influence among community elites (Lauman & Pappi, 1976; Lauman & Knoke, 1987), corporate interlocks (Levine, 1972), role structure in groups (Breiger, Boorman, & Arabie, 1975; Burt, 1976, 1982) and interaction patterns in small groups (Romney & Faust, 1982; Freeman, Freeman, & Michaelson, 1989).

From the early applications used to study specific aspects of the theoretical idea of a social group, social network researchers have developed more precise definitions of social network subgroups including that of *cliques* (Luce & Perry, 1949; Alba, 1973; Seidman & Foster, 1978; Mokken, 1979). Luce and Perry (1949) define a clique as a subset of people among whom all choices are mutual.

In summarizing network research, Wasserman and Faust (1994) write, "Social network analysis provides a precise way to define important social concepts, a theoretical

alternative to the assumption of independent social actors, and a framework for testing theories about structured social relationships" (p.17).

Perpetuation Theory

Wells and Crain (1994) were among the first to incorporate the notion of Network Analysis into the concept of Perpetuation Theory. Braddock (1980) developed Perpetuation Theory in his study of the segregation of black Americans. According to his theory, segregation tends to perpetuate itself "across the stages of the life cycle and across institutions when individuals have not sustained experiences in desegregated settings earlier in life" (McPartland & Braddock, 1981, p. 149). Therefore, although students are exposed to desegregated settings, they will continue to make life choices that perpetuate racial beliefs if they return to segregated lifestyles.

Black students who are exposed to desegregated settings, however, were more likely to attend predominately white colleges (Braddock, 1980). This was a result of their familiarity with the desegregated setting; having been exposed to it through desegregation. Wells and Crain (1994) expanded on this finding and added that minority students who participated in desegregated settings also had higher educational and occupational aspirations than those who did not.

Using Granovetter's (1973, 1976, 1995) "strong ties" and "weak ties", this could be explained by the fact that students who did not participate in desegregated settings maintained primarily strong ties within their cultural environment. Students exposed to desegregation, however, established "weak ties" with non-minority students which allow them to bridge the cultural boundaries of segregation. When a student returned to a

segregated setting, the strong ties once again became the predominant frame of reference.

Granovetter (1973) maintains:

“the strength of a tie is a (probably linear) combination of the amount of time, the emotional intensity, the intimacy (mutual confiding), and the reciprocal services which characterize the tie. Each of these is somewhat dependent of the other though the set is obviously highly intracorrelated.” (p. 1361)

When used in the context of group interaction, strong ties would include close relationships entailing similar thoughts and backgrounds. Using Granovetter’s (1973) equation of time, emotional intensity, intimacy, and reciprocal services in group settings, strong ties would likely be found within cliques or subgroups rather than between them. In contrast, weak ties would likely be found between these entities and create bridges represented by occasional or distant interaction among members of the separate groups.

Perpetuation Theory is also useful in predicting the acclimation of individuals into group settings. Again using Granovetter’s (1973) concept of time, emotional intensity, intimacy, and reciprocal services, individuals with similar backgrounds and experiences to those in the group would more readily establish strong ties within the group.

Individuals with dissimilar backgrounds would more likely develop weak ties with existing members. Although these individuals could learn to operate within the environment and with existing group members, as additional members were added, strong ties will be formed between those members with similar backgrounds and experiences.

Thus, over time, subgroups or cliques may form within the group.

Procedures

The use of naturalistic inquiry allows the researcher to attempt to provide solutions to daily problems. Through this research method, data is obtained, tentative meaning is applied, new data is obtained, and meaning is revised (Merriam, 1988). The use of a conceptual framework in research is similar to Kuhn's (1970) conceptualization of a paradigm. It provides a way of looking at the problem by providing a set of assumptions, rules and direction.

The explanatory case study method (Yin, 1984) was used for this study. It is "an ideal design for understanding and interpreting observations of educational phenomena" (Merriam, 1988, p. 2). Explanatory case studies generally seek to answer the "how" and "why" questions. In case study research, there are no fixed procedures or rules by which to abide. There are simply guidelines and the wisdom of seasoned researchers available for assistance (Merriam, 1988). The case study report allows for a thick description of the phenomenon under study (Lincoln & Guba, 1985).

Researcher

I, the researcher, have formally worked in vocational education for 12 years: teaching agricultural education in a comprehensive high school for two years and serving in various administrative capacities in a area vocational-technical school for 10 years. All of these years were at the same area school and my role at the time of this study was Assistant Superintendent for Instruction where I provided leadership for all instructional programs offered by the institution. My educational beliefs have been greatly impacted by my life experiences, as well as the philosophy shared by those I have been associated with through work and educational experiences. As I evolve as an educator, I become

more cognizant of my beliefs and their relationship to my education, my environment, and my expectations. It is through self-reflection, examination, and professional collaboration with other educators, that I gain understanding, direction, and professional growth.

It is my assumption that educational administrators develop a philosophy of education through previous experiences. This philosophy is influenced by experiences as a student, as a teacher, and as an administrator. It is also influenced by, and through, interaction with other educators with like and different work experiences. I presume that philosophies are developed and perpetuated through socialization and experiences. I believe that superintendents, especially in the area vocational-technical school system, can positively or negatively impact not only their own schools, but the system as a whole through their beliefs and interaction with their peers. They set the tone for the vocational system of education in Oklahoma. This view greatly affected my research - from developing a problem statement to analyzing data and interpreting findings (Merriam, 1988). Given who I am, with my theoretical perspective, preferences, and assumptions, I was cautious to cast the data against the literature and not base my interpretations upon my perspective, preferences, and assumptions.

Data Needs and Sources

Naturalistic inquiry focuses meaning on context (Merriam, 1988). This method follows the process of observing, recording, analyzing, reflecting, dialoguing, and rethinking. Network Analysis is based upon an assumption of the importance of relationships among interacting units (Wasserman & Faust, 1994). Although Network Analysis has primarily been used to investigate relationships among individuals and

groups in formal settings such as classrooms and work environments, it can also be useful in analyzing relationships among individuals in less formal groups such as trade associations.

This study included the 28 superintendents of the Oklahoma Area Vocational Technical School Superintendents Association and the Director of the Mid-Del Area Vocational-Technical School (Mid-Del AVTS's chief executive officer is titled Director). Future references to AVTS superintendents will be inclusive of this position. Attempts were made to obtain data that was descriptive of the relationships among the members of this association.

Data Collection

To obtain data concerning characteristics of existing relationships, members of the Oklahoma Area Vocational-Technical School Superintendents Association were surveyed (Appendix A) and asked to self-select three other members of the association they would seek advice from regarding the following: legislative issues; finance/budgeting issues; personnel issues; curriculum issues; the future of vocational education; social issues; and, others issues they specified.

In addition to the Network Analysis survey, each respondent was asked to complete a demographic profile identifying individual factors related to education and work experiences. After the initial analysis of the sociometric data, these demographic factors were cross-referenced to identify potential commonalities among nodes within identified cliques.

The secondary instrument for data collection and analysis was me as the researcher. Follow-up interviews with selected respondents provided additional

information useful in the analysis stage of the study. Through interviews, I was able to clarify responses and continuously assess and evaluate data collected, allowing me to redirect, probe, and review the line of inquiry (Guba & Lincoln, 1981). Interviews allowed clarification of individual choices and helped me to "understand and put into a larger context the interpersonal, social, and cultural aspects of the environment" (Lincoln & Guba, 1985, p. 85).

Through interpretation of data received from the respondents, further investigation was conducted using follow-up interviews with some to gain greater insight about the choices they made. In addition, unobtrusive data was collected to enhance and verify the demographic data submitted. It is through my presentation and interpretations of what occurred during this study that I acquaint the reader with the respondents' insights, assumptions, and beliefs (Merriam, 1988).

Before proceeding with the research study, I submitted my proposal and received approval to proceed with the study from the Oklahoma State University Institutional Review Board. Appendix B contains the Institutional Review Board approval form.

Data Analysis

Data were analyzed simultaneously throughout data collection. Merriam (1988) maintains that in a qualitative design, one does not know whom to interview, what to ask, or where to look next without analyzing data as they are collected. "Hunches, working hypotheses, and educated guesses direct the investigator's attention to certain data and then to refining and/or verifying one's hunches." (p. 123)

Although the initial sample population was well-defined, follow-up interviews were selected based upon simultaneous review of the literature. This allowed for

reflection and synthesis to occur, informing and redirecting the study. Network Analysis data were represented both through matrices and graphically to create a picture of what the structure of the group “precisely” looked like (Moreno, 1953). Specifically, the data were examined for evidence of the formation of cliques or subgroups within the association. As cliques were recognized, demographic data presented by the respondents and from selected interviews were corresponded with positions held within the group structure. Determinations were then made about commonalities of demographic characteristics existing within cliques. Data analysis sought to provide information on Granovetter’s (1973) four characteristics regarding ties that exist among members of the association: 1) amount of time; 2) emotional intensity; 3) intimacy; and 4) reciprocal services. Factors one and four (amount of time and reciprocal services) were revealed through choices made on the survey instrument. Factors two and three (emotional intensity and intimacy) were revealed through follow-up interviews with selected members.

Research Criteria

Certain research criteria must be met for a qualitative study to be considered trustworthy. These criteria are credibility, transferability, dependability, and confirmability (Erlandson et al., 1993; Lincoln & Guba, 1985).

Credibility. Credibility refers to the relationship between the constructed realities generated by the respondents and the interpretation and transmittance of those realities by the researcher (Guba & Lincoln, 1989). Thus a credible outcome would be one that “adequately represents both the areas in which these realities converge and the points on which they diverge” (Erlandson et al., 1993, p. 30). To establish credibility of the

research data, I worked diligently to separate myself and my biases from that data, and attempted to accurately depict what the research subject had submitted (Erlandson et al., 1993).

Peer debriefing and member checks were used to achieve credibility. Peer debriefing allowed an outside professional to analyze the study and provide feedback about the findings and conclusions in order to challenge, refine and redirect the process of the study as necessary. Dr. Adrienne Hyle, my dissertation advisor, served as this professional. Member checks allowed respondents to test categories, interpretations, and conclusions of the inquiry throughout and upon completion of the study. Member checks with those people serving as data sources were conducted by the researcher: summarizing the data and granting the respondent the opportunity to challenge interpretations or modify factual mistakes (Erlandson et al., 1993).

Transferability. Transferability refers to the degree to which a study's findings can be applied in other situations or with other respondents (Lincoln & Guba, 1985). Thick description and purposive sampling help facilitate transferability (Erlandson et al., 1993). Data were presented with enough detail to allow the reader sufficient information about context, sample, and methodology to expose its transferability to other situations or similar groups. Through purposive sampling, the participants were selected to meet the purpose of the study. Individuals were chosen based upon their inclusion into the association which I studied.

Dependability. Dependability in a naturalistic study refers to the reliability and trackability of the process (Lincoln & Guba, 1985). Changes in methodology and research design may impair the ability of a replicated study with the same sample to bear

the same results. This study only examined relationships which existed at the time of data collection which further limits the ability to replicate the study.

Confirmability. Confirmability is the degree to which the results are the product of the focus of inquiry and not the biases of the researcher. "The naturalistic researcher does not attempt to ensure that observations are free from contamination by the researcher but rather to trust in the 'confirmability' of the data themselves" (Erlandson et al., 1993, p. 34).

Confirmability, like dependability is relayed through the audit trail of data collection and through a concerted effort on the part of the researcher to recognize potential bias. Conclusions, interpretations, and recommendations should be related to their sources and supported by the study (Erlandson et al., 1993). An audit trail of interview transcripts, tapes, notes, analysis, and other documents have been kept.

Significance of the Study

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

Theory

Theoretically, this study combined the use of Social Network Analysis and Perpetuation Theory to expose and provide an explanation for the interaction among members of the sample group. Granovetter's (1986) concept of strong and weak ties provided guidance in presenting and formulating understanding regarding these interactions. This study will also clarify or augment Network Analysis and Perpetuation Theory for use in educational settings.

Research

This study adds information to a limited knowledge base regarding the interactions of individuals within informal associations. In addition, it explores the effects of diversity in educational background and previous experiences, particularly in the field of education on these interactions.

Practice

This study enhances the practice of education by providing group members with insight regarding the formation of cliques or subgroups within groups due to diversity in education and previous work experience. Through this recognition, practice can be enhanced by a concerted effort to recognize and minimize the affects this will have on the effectiveness of maintaining cohesive goals and purposes.

Summary

The purpose of this study was to use Network Analysis and Perpetuation Theory to examine the relationships that exist among the members of the area vocational-technical school superintendents association. In addition, I hoped to identify the potential impact those relationships have on the ability of the members to function as a group. Qualitative methods allowed for “insight, discovery, and interpretation rather than hypothesis testing (Merriam 1988, p. 10).

Reporting

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

CHAPTER II

REVIEW OF THE LITERATURE

This literature review encompasses a variety of topics including the evolution of the delivery of vocational-technical education through the area vocational-technical school system in Oklahoma, the role of network analysis relative to group formation and maintenance, and a review of the applicability of perpetuation theory to informal social networks.

Area School Delivery System

The state of Oklahoma has three distinct and separate educational systems: common education, higher education and vocational education. Each system evolved as a means to meet a unique and distinct educational need of the citizens of the state. Of the three, the vocational education system is the youngest and, as the name implies, evolved as a means of providing job specific training and skills to the citizens of the state.

Vocational programs have been offered through the comprehensive high schools since the early 1920's. "From those humble beginnings, the Oklahoma vo-tech system responded to the needs of an agrarian economy. Early leaders built a solid foundation of vocational agriculture and home economics programs that became national models" (Oklahoma Department of Vocational and Technical Education, 1999, p. 1). The delivery route for vocational education programs in Oklahoma

changed greatly with the passage of the Federal Vocational Education Act of 1963 and Oklahoma quickly emerged as a leader in vocational education through the implementation of a delivery system that included the Area Vocational-Technical School (AVTS) concept (Stewart, 1982).

“A phenomenon of our times in vocational education began with enactment of the Federal [Vocational Education] Act of 1963 and was later broadened. This was the area school movement” (Stewart, 1982, p. 135). Under this legislation, comprehensive school districts were given the authority to combine resources to offer a broader array of vocational courses to students through the formation of an area vocational-technical school district.

The superintendents of these local area vocational-technical schools have played a major role in the development of the state system. Ken Phelps, former superintendent of Tri-County Tech in Bartlesville and one of the founding members of the Area Vocational-Technical School (AVTS) Superintendents Association stated, “Early in the formation of the area school concept, the original superintendents recognized their crucial role in the building of the system” (personal communication, January 25, 1999). The AVTS Superintendents Association provided a support group for the few superintendents at the time and served as an advisory group to the State Department of Vocational-Technical Education and Dr. Tuttle. Their primary concern was to build a new system of education and to work together on common issues facing the system.

The membership of the AVTS Superintendents Association is restricted to the AVTS superintendents. Officers are elected annually to direct the primary work of the

organization which is to provide leadership and guidance for the vocational system. The association acts in an advisory capacity to the state director, monitors and assists in the development of legislative issues affecting vocational education, and works together to develop and implement quality training programs on a state-wide basis (F.A. Shultz, personal communication, January 25, 1999). The governance of each area school is independent but networking opportunities through the association contribute to the development and maintenance of a strong and cohesive area school system in Oklahoma.

As the vocational-technical education system experienced growth and maturity, the composition of the AVTS superintendents association grew and changed. Original superintendents retired or left the system. Individuals hired to fill vacancies brought unique educational and work experiences and included individuals from educational entities other than the vocational-technical system (K. Phelps, personal communication, January 25, 1999). Therefore, the association which was originally representative of a small group of individuals with similar backgrounds, experiences and common challenges became comprised of a larger and more diverse membership. These changes in size and diversity potentially to threatens the organization's commonness and cohesive purpose.

Network Analysis

Early use of network analysis can be traced to the use of sociometric tests or measurements in educational settings to study the extent to which individual pupils were accepted by their peers; specifically, to analyze the social structure of classroom groups (Gronlund, 1959). The utility of sociometric measures was quickly

recognized by researchers in other disciplines. Lindzey and Byrne (1968) noted that researchers found the technique useful in a number of social science applications, “particularly in circumstances where the information is being presented in an ‘action’ context, the possibility of easily engaging an audience without the necessity of presenting technical information or complex explanations may be of crucial importance” (p. 462).

With expanded use, the types of sociometric measures varied but their basic purpose of being a method for evaluating the feelings of group members toward each other with respect to common criterion was maintained. “These instruments are designed specifically to provide a sensitive and objective picture of the interpersonal relations existing within a group and between pairs of individuals” (Lindzey & Byrne, 1968, p. 452). “In simplest terms, a sociometric measure is a means of assessing the attractions, or attractions and repulsions, within a given group” (p. 455). Researchers also agree on the premise that sociometric choices should be based on criteria which reflect actual situations or activities in which the members have real opportunities to participate rather than through simulated situations (Gronlund, 1959).

The use of sociograms (Moreno, 1934) is useful in measuring the interpersonal relations in small groups. Through the development of a sociogram, a visual depiction of the interpersonal structure of groups emerge. Thus, creating a “picture” of relationships in which may be analyzed. In a sociogram, people are represented as points, or nodes, and interactions are depicted by lines linking the nodes. As the use of sociometric tests expanded, so did the types of sociograms (Lindzey & Byrne, 1968).

Two, and sometimes, three-dimensional representations have proven useful for presenting a variety of social structures. These have included structures such as: influence among community elites (Lauman & Pappi, 1976; Lauman & Knoke, 1987); corporate interlocks (Levine, 1972); role structure in groups (Breiger, Boorman, & Arabie, 1975; Burt, 1976, 1982); and, interaction patterns in small groups (Romney & Faust, 1982; Freeman, Freeman, & Michaelson, 1989).

Much of the terminology coined by Moreno explaining the original concepts of sociograms has been widely accepted and is still used by current researchers using sociometric techniques (Gronlund, 1959). These descriptors are indicative of the types of relationships that exist between a node and others and are based upon the number of choices which are present or absent. In a relationship depicted through sociometric techniques, individuals “choose” others who fit given criteria. Those who are chosen are said to have “received” the choice. Terms depicting the number of choices received on sociometric tests include: *star*, an individual who receives a large number of choices; *isolate*, an individual who receives no choices; *neglectee*, an individual who receives relatively few choices; and, *rejectee*, an individual who receives negative choices.

From the early applications involving the use of sociometrics to study specific aspects of individual relationships, the use of this technique to examine groups and resulting subgroups has emerged. As a result, network analysis researchers have developed more precise definitions of subgroups like that of *cliques* (Luce & Perry, 1955; Alba, 1973; Seidman & Foster, 1978; Mokken, 1979). Luce and Perry (1955) define a clique as a subset of people among whom all choices are mutual. In addition

to cliques, *cleavages* existing between two or more cliques within a subgroup provide an additional level of analysis. For example, in a classroom setting, “mutual friendships, small cliques of pupils, cleavages between subgroups, and general patterns of group integration or disintegration are easily identified by the classroom teacher” (Gronlund, 1959, p. 14) and provide different starting points for analysis of relationships which contribute to an understanding of the innate culture of the group.

As a single methodology, the sociometric measure is limited in its utility. Alone, it indicates only that a social structure exists but does not provide information regarding why it exists; “like any diagnostic tool, it merely identifies the present situation” (Gronlund, 1959, p. 15). “Combined with other techniques such as observation and other diagnostic information, however, sociometric tests do serve as a firm base for improving the social structure of groups” (Gronlund, 1959, p. 15). Network analysis combines sociometrics with other frameworks of analysis as a method of identifying qualitative factors leading to interactions among individuals.

Groups are the result of the interactions between two or more individual members. These interactions are often termed “networking” which is defined by Baker (1994) as “the active process of building and managing productive relationships—a vast network of personal and organizational relationships” (p. xiii). These personal and organizational relationships are called social networks. According to Coombs (1973), “the theory of social networks is grounded in two elementary postulates that have been with us for some time: (1) people are in some sense ‘linked’ or ‘joined’ by ties of affect, trust, right, obligation, or expectation; (2)

these social ties exert an influence on the behavior and cognition of the participants” (p. 96).

These postulates parallel Granovetter’s (1973) definition of “ties” as simply the interaction between two individuals. He maintains, however, that ties are measurable and are categorized as either strong or weak:

“the strength of a tie is a (probably linear) combination of the amount of time, the emotional intensity, the intimacy (mutual confiding), and the reciprocal services which characterize the tie. Each of these is somewhat dependent of the other though the set is obviously highly intracorrelated.” (p. 1361).

Other network analysis researchers support the identification and measurement of ties using the “time,” “intensity,” “intimacy,” and “reciprocity” characteristics proposed by Granovetter (1973). Baker (1994) concurs that strong ties are those which involve a large degree of emotional interaction and high emotional *intensity*. Strong ties also have a history and a mutual commitment to the continuation (*time*) of the relationship. Weak ties, on the other hand, lack these features and at the extreme are one-shot transactions with low emotional intensity, no history, and no future commitment.

The *intimacy* of ties deals largely with the common knowledge that individuals share. Baker (1994) states, “similar people know similar things; people who are different—those with diverse backgrounds, travel in disparate social circles, or hold different positions in the organization—know different things” (p. 137). Strong ties, therefore would indicate shared knowledge whereas weak ties would indicate diverse knowledge.

The concept of *reciprocity* in ties is supported by Forsythe and Hoy (1978). They maintain that people interact with others expecting such interaction to be rewarding. If indeed the interaction is rewarding to both partners, then an relationship is likely to continue. If, on the other hand, the exchange is not rewarding, it will be discontinued. Reciprocity, therefore, can be defined as the mutual rewards, tangible or non-tangible, individuals receive through interactions.

Because individuals are largely a reflection of the environment from which they come, demographic variables such as work experience, educational preparation, and gender contribute to the presence and strength of ties. “Numerous studies have been conducted in which sociometric status has been correlated with age, sex, family size, socioeconomic status, and educational preparation” (Lindzey & Byrne, 1968, p. 493). Demographic factors, therefore, become important units of analysis for researchers examining group formation and reasons why group characteristics such as cliques or cleavages exist.

In addition to demographic factors, researchers must also be cognizant of contextual factors that influence relationships. Fischer, Jackson, Stueve, Gerson, & Jones (1977) proposed that two types of relationships exist: relationships of commitment and relationships of convenience. Relationships of commitment are long-lasting, intimate, and are most often derived from the family. Relationships of convenience, on the other hand, are relatively shortlived, less intimate, and are often derived from workplaces and neighborhoods.

When compared with Grannovetter’s (1973) concept of tie strength being measured through time, intensity, intimacy, and reciprocity, the findings of Fischer,

etal. (1977) are congruent with all but that of time. Fischer etal. found that frequency of contact was not necessarily an indicator of the strength of a tie but could merely be the result of contextual factors such as place of residence or work setting.

In summary, the relationships between members of a group can be depicted through the use of sociometric techniques. In relationships, those who possess certain characteristics, abilities, and expertise valued by the norms of the organization will be sought out as exchange partners” (Forsythe & Hoy, 1978). The relationships are denoted by the presence or absence of ties which may be measured using the characteristics of emotional intensity, intimacy, and reciprocity. Although contact (time) is a characteristic which must be present for a tie to exist, its utility as an indicator of the strength of a tie is not widely agreed upon by researchers as frequency of contact may be the result of convenience (contextual factors) rather than commitment (Baker, 1994).

From analysis of individual ties, group factors may also be examined. The clustering of relationships depicted through sociograms and other sociometric techniques provide a starting point for further analysis. The identification of group indicators such as cliques and cleavages lead to the examination of factors which may be present to create the existence of these phenomenon. "Network analysis provides a precise way to define important social concepts, a theoretical alternative to the assumption of independent social actors, and a framework for testing theories about structured social relationships" (Wasserman & Faust, 1994, p.17).

Perpetuation Theory

Perpetuation Theory emerged as a result of Braddock's (1980) study of the segregation of black Americans. Braddock found that segregation tends to perpetuate itself "across the stages of the life cycle and across institutions when individuals have not sustained experiences in desegregated settings earlier in life" (McPartland & Braddock, 1981, p. 149). Although students were exposed to desegregated settings, life choices they made as they returned to segregated settings continued to perpetuate racial beliefs.

Braddock (1980) found that black students who were exposed to desegregated settings, however, were more likely to attend predominately white colleges. This was a result of their familiarity with the desegregated setting; having been exposed to it through desegregation. Wells and Crain (1994) expanded on this finding and added that minority students who participated in desegregated settings also had higher educational and occupational aspirations than did those who did not have the opportunity to participate in a desegregated setting. This was largely the result of exposure to a setting with culturally different and diverse expectations.

Using Granovetter's (1973, 1976, 1995) "strong ties" and "weak ties", this phenomenon can be explained by the fact that students who do not participate in desegregated settings maintain primarily strong ties within their cultural environment. Students exposed to desegregated settings, however, are more familiar with and establish "weak ties" with non-minority students which allow them to bridge the cultural boundaries of segregation. However, when a student returns to a segregated setting, the strong ties once again become the predominant frame of reference.

Likewise, Forsythe and Hoy (1978) found similar results in their study of worker isolation and alienation in educational settings. This study examined the objective and subjective elements of alienation in the work setting as well as the relationships existing between those elements. They found that factors related to isolation among organizational members could be examined in the context of ascribed and achieved characteristics of individuals. They noted that these characteristics either promoted or restricted interaction, hence, promoting relationships or restricting interaction from other individuals. Specifically, they found that individuals tend to direct interactions toward status superiors and status equals. This was consistent with Braddock's (1980) depiction of perpetuation theory.

Hartrup (1998) states, "it is not only the environments to which a person is exposed that affect the individual's perception of those environments, but his or her subjective experience of them, that ultimately shapes that person's course of development" (p. 85). Included in this subjective experience is the interaction with others in the environment. Hartrup further states that individuals purposely choose to function in specific environments which have particular norms and standards "by choosing to affiliate with certain peers" (p. 86). These choices accord individuals access to various resources including certain other peers; "in this way friendships are important avenues by which children become linked to other people" (Hartrup, 1998, p. 86). When an individual has a direct relationship with a peer, they also establish an indirect relationship with the peer's peers who likely operate in similar environments with similar norms and standards. Thus, perpetuation of norms and standards occur through the interactional choices made.

Granovetter's (1973) notion of strong and weak ties is also useful in examining the perpetuation of culture as it attempts to provide structure to the interaction patterns among members of a group. When used in the context of group interaction, strong ties would include close relationships entailing similar thoughts and backgrounds. Using Granovetter's (1973) equation of time, emotional intensity, intimacy, and reciprocal services in group settings, strong ties would likely be found within cliques or subgroups rather than between them. In contrast, weak ties would likely be found between these entities and create bridges represented by occasional or distant interaction among members of the separate groups.

Perpetuation Theory is also useful in predicting the acclimation of individuals into group settings. Again using Granovetter's (1973) concept of time, emotional intensity, intimacy, and reciprocal services, individuals with similar backgrounds and experiences to those in the group would more readily establish strong ties within the group. Individuals with dissimilar backgrounds would more likely develop weak ties with existing members. Although these individuals could learn to operate within the environment and with existing group members, as additional members are added, strong ties will be formed between those members with similar backgrounds and experiences. Thus, over time, subgroups or cliques may form within any group.

Summary

Although the role and purpose of the AVTS Superintendent Association remains unchanged, changing characteristics of its membership threaten the cohesiveness and common purpose of the association and increase the likelihood that incongruent philosophies may result in the inability of the system to maintain its

unique identity. Network Analysis (Granovetter, 1973, 1976, 1995) and Perpetuation Theory (Braddock, 1980; McPartland & Braddock, 1981; Wells & Crain, 1994) provide a useful foundation for explaining the evolution of the AVTS Superintendents Association in terms of the interaction of and support for strong and weak ties within its social system. Characterized by the equation of time, emotional intensity, intimacy, and reciprocal services, strong ties will maintain the dominant cultural norms and values while weak ties will support links between the dominant system and culturally different ones (Granovetter, 1973).

CHAPTER III

DATA PRESENTATION

Through the lenses of Network Analysis (Granovetter, 1973, 1976, 1995) and Perpetuation Theory (Braddock, 1980; McPartland & Braddock, 1981; Wells & Crain, 1994), the purpose of this study was to examine the evolution of the AVTS Superintendents Association. In this chapter the data collected are presented.

Case Study Procedures

An explanatory case study method of inquiry was used to research the problem (Yin, 1984). Naturalistic inquiry focused meaning on context (Merriam, 1988) by following the process of observing, recording, analyzing, reflecting, dialoguing, and rethinking. Network Analysis identified the existence and importance of relationships among interacting units (Wasserman & Faust, 1994) which, in this study, were the 29 superintendents of the Oklahoma Area Vocational-Technical School (AVTS) Superintendents Association.

A “tie” is defined by Granovetter (1973) as simply the interaction between two individuals. He maintains, however, that ties are measurable and can be categorized as either strong or weak. Through identification and description, ties can be useful in identifying the present and predicting the future interaction patterns within groups.

Respondents in this study were asked to self-select certain members of the AVTS superintendents association they would likely seek advice from given specified issues. Through these selections, the respondents provided preliminary data regarding the

patterns of relationships that existed among members of the association. Prior to collecting data, I made several initial assumptions:

1. Not all members of the association would choose to participate;
2. Of those who did participate, the interaction patterns identified would be varied; and,
3. Not all members of the association would be selected given the issues provided.

The first assumption proved to be correct. Of the 29 members who were mailed surveys, 25 responded (86%). Though follow-up calls were made to confirm that those who had not responded had received the mailing, no additional surveys were returned. No information was available regarding why the other four members of the association chose not to participate. The lack of participation by all members my limit study findings. Upon compilation of the data received through the survey instrument, the second and third assumptions were verified. With 25 of the possible 29 members responding, the 438 choices made were spread among 28 members of the association. One member of the association was not selected on any issue. To protect the integrity of the choices made by others, however, data involving choices made toward those four are included in the data presentation. Data collected are presented in two sections: survey data and interview data.

Survey Data

The purpose of the study was to determine that ties existed and attempt to describe them. To accomplish this, the participants were asked to respond to six issues. These issues were determined to be common elements within the job role of an AVTS

superintendent. They were also issues that the members of the association dealt with collectively while providing direction for the state vocational system.

Included with the mailed survey was a demographic questionnaire. Respondents were asked to identify the highest degree they had earned and the number of years work experience they possessed in each of the following categories: superintendent in their current AVTS; superintendent of other AVTS(s); superintendent in comprehensive school(s); other administrative positions in AVTS(s); other administration in comprehensive school(s); teaching experience in AVTS(s); teaching experience in comprehensive school(s). To ease in the presentation of the data and to maintain the confidentiality of the respondents and their choices of other members, each member of the AVTS superintendents association was randomly assigned an identifier using the letters A-Z and the three symbols @, &, and #. These identifiers will be used throughout the presentation of the data.

Of the 25 respondents, all held at least a masters degree which is required for superintendent certification. Ten (B, D, E, F, G, M, U, X, Y, and #) held Ed.D.s and two (J and N) held PH.D.s. Examination of reported work experience revealed that length of tenure in current positions ranged from less than one year to 26 years with the average number of years being approximately 8. Only 3 (M, U, and @) of the 25 respondents reported having held superintendent positions at more than one AVTS. Table I is a summary of responses regarding highest degrees earned and administrative work experience in school settings.

Seventeen respondents reported having served in other AVTS administrative positions than the superintendency. Six (E, I, M, O, T, and X) reported their only work

TABLE I
 DEMOGRAPHIC DATA CONCERNING EDUCATIONAL LEVEL
 AND YEARS OF SCHOOL ADMINISTRATIVE EXPERIENCE

Member	Highest Degree	Superintendent Current AVTS	Superintendent Other AVTS	Superintendent Comprehensive School	Administration AVTS	Other Administration Comprehensive	Other Administration	Total School Administration Of Any Kind
A	M.S.	3	0	0	27	1	31	
B	Ed.D	11	0	0	8	0	19	
C	—	—	—	—	—	—	—	
D	Ed.D	15	0	8	4	0	27	
E	Ed.D	9	0	20	0	3	32	
F	Ed.D	2	0	0	8	2	12	
G	Ed.D	2	0	5	2	5	14	
H	M.S.	1	0	2	15	5	23	
I	M.S.	11	0	15	0	6	32	
J	Ph.D	3	0	3	8	4	18	
K	—	—	—	—	—	—	—	
L	—	—	—	—	—	—	—	
M	Ed.D	6	4	10	0	7	27	
N	Ph.D	3	0	0	14	12	29	
O	M.S.	13	0	0	0	8	21	
P	M.S.	12	0	0	7	1	20	
Q	M.S.	4	0	—	—	—	4	
R	M.S.	4	0	0	14	7	25	
S	M.S.	1	0	0	12	0	13	
T	M.S.	12	0	15	0	3	30	
U	Ed.D	7	6	0	11	4	28	
V	M.S.	7	0	2	0	0	9	
W	—	—	—	—	—	—	—	
X	Ed.D	26	0	0	0	0	26	
Y	Ed.D	9	0	0	10	0	19	
Z	M.S.	1	0	0	25	0	26	
@	M.S.	10	7	0	—	0	17	
&	M.A.	6	0	10	0	0	16	
#	Ed.D	13	0	0	2	4	19	

experience in an AVTS to be that of the superintendent and one respondent, Q, provided incomplete data regarding other AVTS work experience. Ten respondents (D, E, G, H, I, J, M, T, V, and &) reported having served in the capacity of superintendent of a comprehensive school district while 15 (A, E, F, G, H, I, J, M, N, O, P, R, T, U, and #) reported that they had served in other administrative capacities within a comprehensive school setting.

In regard to teaching experience, although all respondents disclosed having at least two years of teaching experience as is required for administrative certification. Only five reported having taught in an AVTS while 25 reported teaching experience in a comprehensive setting. Subjects taught varied and represented a mixture of vocational and non-vocational subjects including: social studies, business and office education, distributive education, welding, math, science, physical education, history, political science, marketing, English, biology, agriculture, and CVE. Because of this variance, demographic data used in this study for analysis was limited only to educational degrees and administrative work experience.

In addition to demographic information, the survey included a list of all members of the AVTS superintendents association. Using this list, the participants were asked to respond to the following statement: "I would most likely seek advice from these three superintendents regarding [the following issues]: (1) legislative; (2) finance/budgeting; (3) personnel; (4) curriculum; (5) the future of vocational education; and (6) social. In order to not too closely define the parameters for responses, participants were also given the option of specifying one other issue of their choice and then indicating the members they would likely seek advice from regarding that issue. Only four respondents identified

an area in the “other” category. They included: leadership, my region and related urban Oklahoma City issues, board, and any questions of any kind. Because responses to “other” were few in number and varied, the choices made in this area are not presented.

Data collected from this portion of the instrument was compiled and is represented in several ways. Appendix C is a summary representation of all choices made by respondents on each of the six issues. Table II is a summary of the number of choices received by each of the 29 members of the AVTS superintendents association by issue. The highest number of choices received by any member was 39 received by member C, a non-respondent. One member (U) was not identified as a choice by any member for any issue.

Table II also shows that for any issue, the highest number of choices received by any member was 13 (received by member B on the issue of future). And that 15 members (B, C, D, E, M, N, Q, R, S, T, V, X, U, Z, and @) were chosen by at least one other member in all six areas.

Table III shows the total number of selections each member received sorted by rank order. Member C received the highest number of choices (39) and member U received no choices. This table also shows that the number of total choices can be grouped into four clusters: (1) A and C (received 38 and 39 choices); (2) @, B, N, and E (received between 31 and 33 choices); (3) D, Y, R, V, Q, Z, and X (received between 17 and 23 choices); and, (4) M, P, G, I, S, T, #, H, K, &, F, L, W, O, A, J, and U (received between 0 and 12 choices).

Table IV represents the overall choices received by each member in rank order combined with the demographic data showing the number of years each has served in

TABLE II
 TOTAL NUMBER OF SELECTIONS RECEIVED BY AVTS SUPERINTENDENTS
 ASSOCIATION MEMBERS

Member	Legislative	Finance/Budget	Personnel	Curriculum	Future	Social	Total Choices Received
A	0	0	1	0	0	1	2
B	2	5	5	5	13	3	33
C	4	9	9	6	7	4	39
D	11	6	1	1	3	1	23
E	9	10	3	3	3	3	31
F	0	0	1	2	1	3	7
G	1	1	2	2	0	4	10
H	0	3	2	0	0	3	8
I	1	1	3	0	0	5	10
J	0	1	0	1	0	0	2
K	0	1	5	1	0	1	8
L	0	0	3	1	1	2	7
M	2	1	3	1	2	3	12
N	4	2	6	6	8	7	33
O	0	1	1	1	0	2	5
P	1	3	3	2	0	2	11
Q	1	1	3	3	6	5	19
R	10	1	1	5	2	2	21
S	1	2	2	1	1	2	9
T	1	1	1	1	1	4	9
U	0	0	0	0	0	0	0
V	1	5	1	7	5	1	20
W	0	3	0	1	0	2	6
X	8	3	1	1	3	1	17
Y	10	2	2	2	4	3	23
Z	4	0	3	7	1	3	18
@	2	7	8	8	8	5	38
&	1	1	2	3	1	0	8
#	0	2	2	1	3	1	9

TABLE IV
SELECTIONS RECEIVED BY AVTS SUPERINTENDENTS ASSOCIATION
MEMBER AND CORRESPONDING WORK EXPERIENCE

Member	Legislative	Finance/Budget	Personnel	Curriculum	Future	Social	Total Choices Received	AVTS Administration	School Administration	Total School Administration
C	4	9	9	6	7	4	39			
@	2	7	8	8	8	5	38	17	0	17
B	2	5	5	5	13	3	33	19	0	19
N	4	2	6	6	8	7	33	17	12	29
E	9	10	3	3	3	3	31	9	23	32
D	11	6	1	1	3	1	23	19	8	27
Y	10	2	2	2	4	3	23	19	0	19
R	10	1	1	5	2	2	21	18	7	25
V	1	5	1	7	5	1	20	7	2	9
Q	1	1	3	3	6	5	19	4	0	4
Z	4	0	3	7	1	3	18	26	0	26
X	8	3	1	1	3	1	17	26	0	26
M	2	1	3	1	2	3	12	10	17	27
P	1	3	3	2	0	2	11	19	1	20
G	1	1	2	2	0	4	10	4	10	14
I	1	1	3	0	0	5	10	11	21	32
S	1	2	2	1	1	2	9	13	0	13
T	1	1	1	1	1	4	9	12	18	30
#	0	2	2	1	3	1	9	15	4	19
H	0	3	2	0	0	3	8	16	7	23
K	0	1	5	1	0	1	8	0	0	0
&	1	1	2	3	1	0	8	6	10	16
F	0	0	1	2	1	3	7	10	2	12
L	0	0	3	1	1	2	7	0	0	0
W	0	3	0	1	0	2	6	0	0	0
O	0	1	1	1	0	2	5	13	8	21
A	0	0	1	0	0	1	2	30	1	31
J	0	1	0	1	0	0	2	11	7	18
U	0	0	0	0	0	0	0	24	4	28

AVTS administration, comprehensive school administration and total school administration. No consistent patterns emerged regarding the correlation between the rank of number of choices and the work experience.

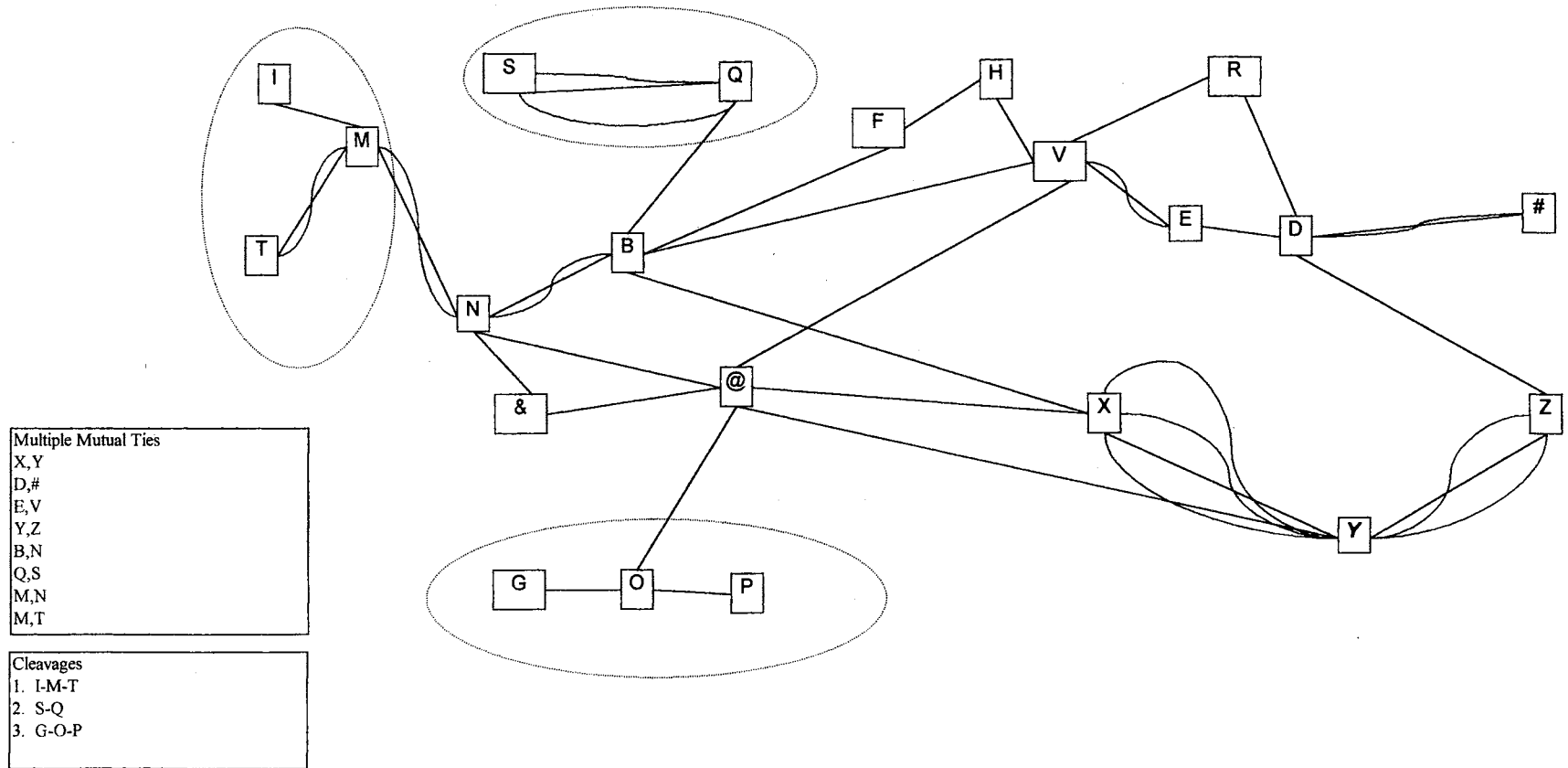
Using the data collected, a sociogram was developed which depicted mutual choices among individuals. A mutual choice was defined as the occurrence when two members each chose the other on any given issue. For example, if member A chose member B in regard to legislative issues and member B also chose member A on the same issue, it was noted as a mutual choice. For each pair of individuals, a total of six mutual choices were possible. Figure 1 is a sociogram developed by plotting mutual choices among members. Members A, J, and U do not appear on the sociogram because they were not involved in any mutual choices. Members C, K, L, and W are not shown since they did not participate in the study.

In Figure 1, individuals, or nodes, were depicted as squares. Mutual choices, or ties, were depicted as lines between the nodes involved in the mutual choice. Some nodes were involved in multiple mutual choices. When this occurred, multiple lines between two nodes were drawn. Nodes involved in multiple mutual choices were: X-Y, D-#, E-V, Y-Z, B-N, Q-S, M-N, and M-T.

Descriptors commonly used in Network Analysis (Gronlund, 1959) were assigned to indicate the types of relationships found to exist. A star is a node in which three or more mutual choices were identified. A bridge is a node in which at least two mutual choices were identified and their ties created a path between two stars. In Figure 1, nodes @, B, D, M, N, and V represent stars. Nodes E, F, H, R, X, Y, and & represent bridges.

Sociograms are also used to determine the presence of subgroups or cliques

FIGURE 1
 SOCIOGRAM DEPICTING MUTUAL CHOICES AND IDENTIFIED CHARACTERISTICS



within a group. Luce and Perry (1949) defined a clique as a subgroup of people among whom choices are made but the subgroup is detached from the larger group. No cliques were identified in Figure 1. Luce and Perry (1949) further identified that cleavages, or subsets of nodes which are connected by only one link to the larger group, may exist. Cleavages were identified in Figure 1 as involving nodes I-M-T, S-Q, and G-O-P. They are labeled as 1, 2, and 3, respectively.

These descriptors of relationships provided different starting points for analysis which contribute to an understanding of the innate culture of the group (Gronlund, 1959). Table V shows the educational and work experiences of members who were identified as being involved within a subset or had multiple mutual ties with another member and will be used in the analysis concerning educational and work experience in Chapter IV.

Interview Data

The second source of data used in describing the nature of ties that existed among the members of the AVTS superintendents association was that gained through follow-up interviews conducted with selected members. Selections were made after analysis of data using Network Analysis techniques. Respondents were randomly selected based upon their representation as one of Gronlund's (1959) characteristics of isolate, stars or bridges as well as one member of each of the three cleavages or subsets (Luce & Perry, 1955). Interview questions were developed to gain information that would be useful in describing and explaining why ties existed between individuals. Questions were formulated to gain specific information which would be useful in determining whether the ties that existed between the interviewee and those that they chose were consistent with Granovetter's (1973) four characteristics of ties: (1) reciprocity; (2) intensity; (3)

TABLE V
 EDUCATIONAL LEVEL AND WORK EXPERIENCE AMONG
 MEMBERS OF IDENTIFIED SOCIOMETRIC CHARACTERISTICS

Member	Highest Degree	Superintendent Current AVTS	Other Administration AVTS	Total AVTS Administration	Superintendent Comprehensive School	Other Administration Comprehensive	Total Comprehensive School Administration	Total School Administration Of Any Kind
Subsets								
G	Ed.D	2	2	4	5	5	10	14
O	M.S.	13	0	13	0	8	8	21
P	M.S.	12	7	19	0	1	1	20
I	M.S.	11	0	11	15	6	21	32
M	Ed.D	10	0	10	10	7	17	27
T	M.S.	12	0	12	15	3	18	30
Multiple Mutual Ties								
X	Ed.D	26	0	26	0	0	0	26
Y	Ed.D	9	10	19	0	0	0	19
D	Ed.D	15	4	19	8	0	8	27
#	Ed.D	13	2	15	0	4	4	19
E	Ed.D	9	0	9	20	3	23	32
V	M.S.	7	0	7	2	0	2	9
Y	Ed.D	9	10	19	0	0	0	19
Z	M.S.	1	25	26	0	0	0	26
B	Ed.D	11	8	19	0	0	0	19
N	Ph.D	3	14	17	0	12	12	29
M	Ed.D	6	0	6	10	7	17	23
N	Ph.D	3	14	17	0	12	12	29
M	Ed.D	6	0	6	10	7	17	23
T	M.S.	12	0	12	15	3	18	30

time; and (4) intimacy. I found it useful to group the responses in relation to the characteristic with which they correlated. The data is presented in this manner.

All interviews were conducted by telephone and were recorded to preserve the integrity of the record. Interviewees were informed that all data would be encoded to protect the confidentiality of the respondents. It was also emphasized to the participant that the study was designed to examine characteristics of existing relationships and not to provide judgements about these relationships.

Based upon initial review of the data, the interviewees were asked to focus responses toward selections they made in regard to one or two particular members. Those members were chosen based upon the interviewee's selection of them as one of their three choices on at least three of the given issues. This allowed responses to be focused and concise rather than broad general statements about relationships with all members of the association. Interview techniques such as probing, restating, wait-time, and follow-up were used to encourage respondents to provide descriptive data about their selections.

For confidentiality purposes, references to individual names or names of schools were replaced with "_____". This aided in preserving the context of the statement without revealing identities of the respondents. Those chosen for interviewees were respondents B, I, O, S, U, and Z. Table VI is a summary of length of time the interviewee knew the members referenced as well as the work experience of each interviewee and the member(s) they referenced during the interview. Table VI also shows the rank of each member by total choices received on the survey instrument.

TABLE VI
 SUMMARY OF INTERVIEWEE'S AND MEMBER(S) REFERENCED
 LENGTH OF RELATIONSHIP, WORK EXPERIENCE, AND RANK OF
 CHOICES RECEIVED.

Interviewee and Member(s) Referenced	Years Known	AVTS Superintendent	AVTS Administration	Superintendent School Comprehensive	Administration School Comprehensive	Rank of Total Choices Received
Interviewee I		11	11	15	21	13
Member X	12	26	26	0	0	10
Member @	12	17	17	0	0	2
Interviewee B		11	19	0	0	3
Member @	20	17	17	0	0	2
Interviewee Z		1	27	0	0	9
Member X	22	26	26	0	0	10
Member B	24	11	19	0	0	3
Interviewee S		1	13	0	0	14
Member Q	10	4	—	—	—	8
Interviewee U		13	24	0	4	20
Member P	11	12	19	0	1	12
Interviewee O		13	13	0	8	18
Member P	12	12	19	0	1	12

Reciprocity

The concept of reciprocity deals with the mutual benefit that individuals within a relationship receive (Granovetter, 1973). For this study, reciprocity was investigated using questions which attempted to determine the professional or intrinsic benefit that the interviewees gained from the relationship with the choice(s) they made. Participants were asked directly if the relationship they had with the person(s) they chose played a role in their obtaining the superintendents position they currently held. Four of the respondents stated no. One respondent, B, stated yes and one, S, stated that the person chosen probably had an indirect role. Participant B stated, “_____ hired me in Oklahoma...he gave me my opportunity to get started in Oklahoma” (B, 5/11/99). Participant S stated, “Directly no. Indirectly as far as part of my growth process, I have always considered him as a mentor so, yes, any ‘success’ that I may have achieved I have to say that _____ probably played a part in it for me” (S, 5/11/99).

Each of the participants reported that they felt “favors” would be granted by those they had identified. Participant B stated, “He would do a favor for you if it’s the right thing” (B, 5/11/99). Respondent Z stated without hesitation, “Sure, absolutely” (Z, 5/11/99). U stated, “If possible, you know, if it could possibly be done” (U, 5/12/99). As a follow-up question, each were asked if they felt that a “favor in return” would be expected, each stated “no”.

Although none identified directly that reciprocity was expected, several identified benefits that they perceived having received as a result of the relationship they had with the individual(s) they chose. One of participant O’s responses gave the indication that some benefit might be at least an unconscious expectation: “He has some inside tracks

that I don't have access to that he can let me know when things are coming ..." (5/12/99). Respondent I made a similar statement about his choices, "They both have a multitude of knowledge about vocational and technical education" (5/11/99).

When asked why Z chose those he did, he stated, "I think _____ and _____ have a real good foundation for vocational education. They come from that background and in my opinion their decision-making and leadership is affected by that. And I respect that." (5/11/99). A similar response was given by participant I, "I would think they would have the expertise to give good advice..." (5/11/99).

Intensity

Intensity is a concept that deals with the emotions involved in a relationship (Granovetter, 1973). In order to determine the intensity of identified ties, participants were asked questions dealing with the length of the relationship, whether those chosen would be considered a friend, acquaintance or a professional counterpart, and whether the relationship had changed as the participant had been promoted into the role of superintendent.

All interview participants reported that they had known the individual(s) chosen for more than 10 years. Two of the participants indicated that the relationship had existed more than 20 years.

In regard to the type of relationship (friend, acquaintance, professional counterpart), the response was varied. Participant I responded "All of the above" (5/11/99). Participant U stated that his choice was a professional counterpart. Participants O and S reported that their choices were friends. Participant B explained his choice as a professional relationship but noted it was a subconscious decision: "I guess

part of the reason I identified him, even though it was kind of subconsciously, was my professional relationship with him and my work with him at _____ and knowing his history and background” (5/11/99). As previously reported, participant S identified his choice as a mentor who had played a large role in his development prior to becoming a superintendent.

When asked if the relationship had changed over time or with changes in positions, the only participant that reported any type of change was Z. He stated, “I just think it becomes more of a peer relationship” (5/11/99).

Time

Time involves the frequency and duration of contacts between the respondent and his/her choice (Granovetter, 1973). Responses to this question varied from once per day to only once every two months. Respondent O reported that he and his choice were in contact almost daily and that the duration of the contacts varied. Respondent O was also the only respondent who indicated electronic mail as a form of contact.

Respondent I indicated two choices during the interview and stated that his only contact was through the professional meetings each month although he stated “I think I am going to be in contact with _____ more now” (5/11/99) but did not explain why. The most often response to frequency of contact was once per month (B, Z, U).

Duration of contacts also varied. Participant S revealed that he somewhat consciously measured the duration by use of the phone bill, “I always look over the phone bill and I’ll probably, during the course of a month, have a couple of 20 minute discussions with him. And several shorter ones.” (5/11/99). Of the participants, O was the only one who mentioned contacts involving topics other than work-related issues.

Intimacy

The area of intimacy deals with philosophical issues, goals, and trust (Granovetter, 1973). The questions asked to assist in determining the intimacy of relationships centered around the likeness or the differences of perceived philosophies and similarities between the respondent's school and the school operated by their choice.

All respondents reported that they felt they held the same philosophy of vocational education as their choices. Respondent I stated of his two choices, "...my philosophy pretty well parallels theirs, in my thinking anyway" (5/11/99). Of his choice, participant B stated, "Very similar philosophy, and some of my philosophy was, I think, honed by working with him" (5/11/99).

When asked about differences between the participant's school and that of those they chose, the responses identified some differences. Respondent I revealed that he felt the other schools were more "high-tech" than his but that his was "getting there". One respondent, O, stated that his school was urban whereas the school of the superintendent he chose was rural. Another respondent, S, stated that he felt that his choice's school was more complacent than his but attributed it to the history of the schools and the leadership provided by the previous superintendents. Other differences identified were more indicative of student population mix (adult vs. secondary) or geographic location of the school rather than differences of philosophy.

Respondent S mentioned that "confidentiality" was important and that "I can call him and ask him anything and don't have to worry about it. He doesn't think I am dumb" (5/11/99).

Future

In closing each interview, the participants were asked to express their thoughts on where the future of vocational education was directed. Within this frame, they were specifically asked to express the role that they viewed the AVTS superintendents association playing in that future. As responses were made, several common themes were identified.

Some felt that the superintendents association would play a major role in the future of vocational education. Participant I stated, "I think they will play a big leadership role in the direction we go. I think we have a big impact on what the state department does" (4/11/99). Respondent S stated of the association, "I think that the superintendents group is real important. I think it gives us an opportunity for a forum to discuss ideas and philosophies" (5/11/99). Participant O stated, "I think it is going to be one of the key factors. They are going to be the people that make things happen at the state department as well as at the legislature. For us to move forward, it has got to come from that group" (5/12/99).

Other participants, however, expressed concern about the cohesiveness of the organization. Participant B stated "I wish I could answer that question to say that the association could have a great impact on the future of the system. I think...I'm not sure that the association itself is going to have that big of an impact. I think it is going to be a small group of individuals that really lead the way" (5/11/99). Participant Z shared a similar concern. After a hesitation, he stated, "I hope they play a vital role. I'm a little concerned about it, but I do hope that they should play a vital role in the direction of vocational education in Oklahoma or maybe even the nation" (5/11/99).

One participant, who asked that his comment remain confidential, stated, "I think we lack the right gel of leadership...I think we've got a whole lot of people that have backgrounds in public education that have been put into those positions, that really don't understand the philosophy of vocational education, and its, maybe, they're not willing to work as hard as some others are." Participant U expressed a similar concern, "Well, we've got too many individuals who profess to be team players that are not team players. And, that fragments a lot of the things that I knew that superintendents used to do. And, therefore, it weakens the organization" (5/12/99).

A general question about the future of vocational education also brought forth several comments regarding differences of opinions among those participating in interviews. Two participants, O and U, mentioned that they felt that the area school system was going to become a part of higher education. Participant U stated, "I think that area schools will always be there whether they are a part of some other institution or higher education or whatever. I don't think they will do away with the bricks and mortar but I have concerns for the system" (5/12/99). Participant O stated, "I think we are headed toward higher ed. [education]. I see more and more emphasis going that way and it scares me" (5/12/99).

In looking at future changes in the educational system as a whole, B stated: "I think we're the ones that could possibly get left behind. I don't think any of us really know the answer to that, I think we've got to put our heads together and come up with some alternatives" (5/11/99).

Of the six interviews, most pointed to the role of the area school with business and industry as a secondary emphasis. More often mentioned was the need for emphasis

on secondary or full-time programs. These were noted as the “foundation programs” and statements were made such as “we need to not forget what got us there” (I, 5/11/99). Participant S termed the programs for secondary students as the “first mission and first cause” (5/12/99). Participant I stated that “we need to continue to involve business and industry in our advisory committees and new programs that we do” (5/11/99) but did not mention needing to train specifically for business and industry.

Another common theme that emerged from the questions dealing with the future was succession planning. “It has got to come from inside our organizations. We have got to work on preparing people to take our places...because if we don’t, more and more, particularly rural boards are going to reach out to the common school guys. Boy they chomp at the bit to take these jobs. They’re just lying in wait, hoping to get in.” (B, 5/11/99). One respondent stated that he had several applicants apply for a recent opening in administration at his school but, of the applicants, he felt that few were qualified. “I was run over with applicants but I wasn’t run over with quality applicants” (S, 5/12/99). When asked what type of backgrounds applicants had, he stated, “Everything, you know, coaches with three losing seasons...that type of situation. Some people with vocational-technical experience, some people that came up through the ranks of common schools that might be principals now that are wanting to come the vo-tech to slow down...” (5/12/99). As a result of this experience, S echoed B’s statement regarding the need for leadership development from within the system.

Summary

The data collected from respondents in the form of demographic surveys, and interviews has been summarized in this chapter. This serves as a reference point for the analysis of the data with respect to the problem statement in Chapter IV.

CHAPTER IV

ANALYSIS OF THE DATA

The Area Vocational-Technical School (AVTS) superintendents association is an organization comprised of the 29 superintendents of area vocational-technical schools in Oklahoma. Individually and collectively, members of this association have an impact on the future of the vocational education delivery system in the state.

By virtue of the fact that the Oklahoma AVTS superintendents association is an organized group, it was assumed that at least some form of tie existed between all members of the association. For the purpose of this study, therefore, analysis was limited to only the reported ties. Further, without interviewing each member and asking them to describe each reported tie, clear differentiation between the strength of the ties could not be made. It was determined, however, that this did not limit the ability to satisfy the research question by examining the mutually reported ties and their resulting relationships as identified through Network Analysis.

Demographic Data

The data presented in Chapter III were analyzed to determine in what ways educational levels or previous work experiences were determining factors or contributors to the relationship patterns that exist among members of the AVTS superintendents association. Analysis was made as data was presented by the respondents and throughout the manipulation of the data which allowed different viewpoints from which to make determinations.

In order to hold a valid superintendent's certificate in the state of Oklahoma, certain educational requirements must be met. Consistent with these requirements, all 25 of the respondents were found to hold at least a masters degree and have taught for two years. In addition, a total of 11 respondents reported having earned a doctoral degree; nine Ed.D.s and two PH.D.s. In examining the ties reported, no correlation could be found between level of education and relationships among respondents. It is also important to note that the requirements to hold the position of superintendent in either the AVTS or the comprehensive setting are the same.

Sociogram

To aid in examining data, the sociogram in Figure 1, page 43, was developed to graphically depict the mutual ties that existed among members of the AVTS superintendents association. It provided a starting point for analysis of the relationships that exist. Consistent with Gronlund's (1949) finding that as a single methodology, sociometric data is limited in its utility, structural elements which emerged from the sociogram were further examined through the use of demographic and interview data. In this way, the sociogram became a useful tool in analyzing factors contributing to the formation and maintenance of relationships among members of the group.

Work Experience

As the sociogram was developed, two elements emerged which provided a reference point for further examination. Several of the members reported having multiple mutual ties with other members of the organization. This occurred when they chose to seek advice from an individual on more than one issue and the other individual chose

them on those same issues. It was assumed that these ties would be stronger than those for which only one mutual tie or no mutual ties were identified.

Eight pairs (X-Y, D-#, E-V, Y-Z, B-N, Q-S, M-N, and M-T) were found to be involved in multiple mutual ties (Figure 1, page 43). Referencing Table V, page 45, the school administrative work experience of individuals reported within these multiple mutual ties was compared. Commonalties in administrative work experience were found to exist among six of the eight pairs. Respondents in pairs X-Y and Y-Z reported that their only experience had been in the area school setting. Pairs, D-#, E-V, M-N, M-T reported having both area school superintendent and comprehensive school administrative experience. Incomplete data was provided by Q so analysis could not be made and respondent B in the B-N tie reported only area school experience while N reported both area school and comprehensive school experience.

Further analysis of data related to the pairs with multiple mutual ties found that not only the type of service was similar but also length of service was comparable. Pair X-Y both reported no comprehensive school administrative experience but had between 16 and 19 years of AVTS administrative experience each. D-# reported both area school and comprehensive school administrative experience with the number of years difference in serving as an AVTS superintendent being only two (13 and 15 years). E-V also showed that they had served as superintendents for approximately the same number of years (7 and 9 years). Pair Y-Z reported only area school experience (19 & 26 years) and although B reported having some comprehensive administrative experience while N did not, they had within two years the same number of administrative experience in an AVTS. The pair of M-N shared a combination of administrative experience as did M-T.

The work experience pattern and number of years served were also similar for each of these pairs.

In analyzing the sociogram on Figure 1, page 43, three subsets, or cleavages were found. Examination of the work experience of the cleavages, subsets 1-3, using Table V, page 45, found that members of subset one, I-M-T, each reported having ten or more years experience as area school superintendents with no other area school administrative experience. They also each reported having served as comprehensive school superintendents for ten or more years with other administrative experience in a common school setting prior holding the superintendency.

Subset 3, G-O-P, each reported a mixture of area school and comprehensive school administrative experience. In Table V (p. 45), two of the members, O and P, had served approximately the same number of years as area school superintendents (13 and 12) while G and O shared the common characteristic of approximately the same number of years experience in common education (10 and 8). Of the three, however, G was the only member who had served in the capacity of comprehensive school superintendent prior to entering into the area school setting. Analysis of subset 2, S-Q, was not possible due to the fact that Q did not return complete work experience data.

Summary

In summarizing the influence of education and work experience as factors in the formation of ties between members of the association, there was no evidence that educational level was a factor. Analysis of the data did indicate that similarity between the work experiences of members was a factor in the pattern of relationships which formed between members of the association. Members who had solely comprehensive

school administrative experience prior to becoming an area school superintendent tended to form relationships more easily with others with the same experiences. Members with both comprehensive and other area school experiences also tended to develop relationships with others with like experiences.

It can be concluded from this data that work experience is a factor in the establishment of relationships between members of the group. Individuals within the group tended to form relationships with others with like experiences.

Interview Data

Because only a representative sample of respondents were selected for interviews, analysis of the data will focus only on the ties between the interviewee and one or two other members they selected as someone they would likely seek advice from on at least three of the six issues provided. Analysis was made in relation to Granovetter's (1973) four characteristics of ties: (1) amount of time; (2) emotional intensity; (3) intimacy; and (4) reciprocity.

Time

The characteristic of time deals explicitly with the frequency and duration of contacts between two members identified within a tie. Reported duration of interactions was similar for all interviewees with a consensus that duration varied dependent upon the issue being discussed. Of those interviewed, the most frequent response was once per month. This corresponded with the schedule of association meetings and was consistent with the finding of Fischer, et al. (1977) that time might not be an indicator of the strength of a tie but could be the result of contextual factors such as place of residence or work setting. The infrequent contact would seem to indicate that the ties between the members

are professional rather than personal. Thus, as revealed through other interview questions, the nature of the relationships centered around topics shared as a result of role definition. The fact that all members come together on a monthly basis in itself forms a tie between all members. Thus, had the survey included a broader array of choices such as members of their own staffs, the selections made might have indicated more frequency with their own staff members than with other superintendents.

Two members (O and S) did, however, report more frequent contact. Respondent O reported almost daily contact while S reported contact about twice per week. As will be revealed in the characteristic of intensity, both of these individuals reported that their choices were “friends”.

Intensity

Strong ties are those which involve a large degree of emotional interaction and high emotional intensity (Baker, 1994). There must also be at least some commitment on the part of the individuals involved in the tie to maintain the relationship over time (Baker, 1994). To determine the intensity, participants were asked how long they had known member(s) referenced and whether they considered them to be a friend, acquaintance or professional counterpart. They were also asked to describe the relationship before having become a superintendent and whether the relationship had changed over time.

Of the six interviews, all reported to have had a relationship with their respective selections for greater than ten years. Two, Z and B, reported the relationship had existed for greater than 20 years. In relation to whether the relationship had changed, none of the participants stated that they felt there had been substantial change over time.

In regard to the emotional involvement, two of the respondents, O and S, stated that their choices were “friends”. Participants B and S also used the term “mentor” when describing the relationship that their choice had with them. The use of terms such as friend or mentor represents personal involvement by both parties in the relationship.

In terms of intensity, therefore, the data reveals that the relationships existing between the interviewees and their choices were consistent with the notion of intensity as described by Granovetter (1973) and Baker (1994).

Intimacy

The intimacy of a tie can be described largely as the common knowledge that is shared between the two individuals involved. Baker (1994) states that “Similar people know similar things; people who are different—those with diverse backgrounds, travel in disparate circles, or hold different positions in the organization—know different things” (p. 137). To determine the intimacy of relationships, participants were asked to identify whether their philosophy of education was similar to or different than that of the individual(s) chosen. They were also asked to describe similarities and differences between their schools and the schools of those they chose. The assumption being that the philosophy of the leader would be exhibited through the programming of the school.

All participants stated that they felt their philosophy and that of those they chose were similar. Differences in school settings dealt mainly with sizes of school, geographic locations, and populations served. Follow-up questions to determine if the differences were a result of philosophical differences found this not to be true. Most reported that differences were a result of past leadership or other outside influences such as the location of the school.

Although participants did not identify differences between their philosophy and those they selected, comments made during the interview process did reflect a perceived difference of philosophy among the members of the association as a whole. This issue will be addressed in a later section of the analysis. In terms of intimacy, therefore, participants revealed that their selections were made based upon a likeness of philosophy and shared knowledge.

Reciprocity

The concept of reciprocity deals with the rewards individuals receive from a relationship (Granovetter, 1973). All respondents stated that they felt the other individual would provide a favor without the expectation of a favor in return. Only two respondents stated that they felt their choice had a role to play in their obtaining the position they hold but both further stated that it was a result of the personal growth afforded through the relationship rather than direct involvement.

Some expectation of reciprocity was revealed through the responses given when participants were asked why they chose those they did. These were responses like: “experience in vo-tech and rationale they use in their judgement” (I, 5/11/99); “well-rounded superintendent, his strength...knowledgeable” (B, 5/11/99); “good foundation of vocational education” (Z, 11/12/99); and, “commonalities such as size of school, similar budgets” (U, 11/12/99). Analysis of these statements indicated that each felt the choice that they made could provide positive assistance in their role as superintendent of an area school. The rewards, therefore, were in the form of advice and direction rather than tangible rewards such as favors and favors in return. Reciprocity was, therefore, indirectly expected and the relationships examined were mutually beneficial.

Sociometric Choices

Although the primary focus for collecting the Network Analysis regarding choices was to identify and describe ties that exist among members of the association, the data revealed other factors worth noting. Table IV, page 40, lists the members of the association in order by the total number of choices they received. From this table, several factors can be noted. First, there is no clear relationship between work experience and the total number of choices a member received. Examination of Table IV revealed that the member receiving the second highest rank (@) had 17 years of total school administrative experience while member U, who received no choices had 28 years of total administrative experience.

Second, the membership can be clustered according to total number of choices received. The first cluster consists of superintendents C and @. The second cluster consists of members B, N, and E. The third cluster consists of member D, Y, R, V, Q, Z, and X. The remaining members comprise the fourth cluster.

Although demographic data for member C was not returned, my personal knowledge of this member allowed me to conclude that the number of years experience in an area school setting for member C is similar to that of member @. Likewise, two members of the second cluster share very similar lengths of service in an area school setting. Combining clusters one and two, members, C, @, B, and N have served in administrative capacities within an area school for almost the same number of years.

Although member E was ranked fifth in regard to total number of choices received, work experience reported is inconsistent with the other members listed within the top ten. Member E reported having served 23 years in administration in a

comprehensive setting compared with only 9 years as an area school superintendent. In regard to total number of choices received, however, this member was selected as someone whom others would seek advice from on legislative and finance/budget issues. Using this as a reference, I informally directed questions to other members of the group in order to determine why this might occur. My general finding was that this member was well respected among both area school and public school superintendents for his knowledge of both the political arena and school finance.

In further examination of the clusters which emerged from Table IV (p. 40), four of the seven members in the third cluster reported having only area school experience while five of the seven reported between 19 and 27 years of total administrative experience. From this data, it can be concluded that similarities in work experience is a factor in the relationship patterns that were identified but tenure, in itself, was not.

Summary

Consistent with the literature reviewed in Chapter 2 regarding the use of Perpetuation Theory (Braddock, 1980; McPartland & Braddock, 1981; Wells & Crain, 1994) in conjunction with Network Analysis (Granovetter, 1973, 1976, 1995); the data presented in Chapter 3 revealed that, although individuals are introduced into settings and new ties (weak ties) are established, the dominance of strong ties remains. Weak ties may exist due to contextual factors such as interaction that occurs at regularly scheduled, monthly meetings, but they may not be productive lasting ties.

Analysis of the data found the ties disclosed by other members of the association in response to survey and interview questions to be generally consistent with the notion of strong tie. As shown in Table VI, page 47, for those chosen to be interviewed, the

briefest period of time that the relationship had existed was greater than 10 years. Of the ten members listed in Table 1, page 36, as having less than five years experience as an area school superintendent (A, F, G, H, J, N, Q, R, S, and Z), eight members (F, G, H, N, Q, R, S, and Z) are depicted in Figure 1, page 43, as having mutual ties with other members. Four members (N, Q, S, and Z) were identified as having multiple mutual ties. These four reported years of experience in other AVTS administration ranging from 12 to 26 years (Table 1, page 36). In terms of relationships with other members of the association, this long-term involvement in the area school setting would provide opportunities for more frequent contact with the other members of the association prior to becoming a superintendent. The other six “new” members of the association were not identified through multiple mutual ties.

This finding would be consistent with the finding of Braddock (1980) that students exposed to desegregated settings are more familiar with and establish weak ties with non-minority students which allow them to more easily bridge the cultural boundaries of the segregated setting. In terms of this study, those who had long-term involvement in the area school system seemed to develop ties more readily within the association.

Although no true cliques (Luce & Perry, 1955) were found, examination of the sociometric data did reveal that three cleavages existed. Analysis of these groups found that commonalties existed in both patterns of work experience and years of experience. The attraction of these members to each other based upon like experiences is also consistent with Braddock’s (1980) findings.

The ties disclosed were also found to be consistent with Forsythe and Hoy's (1978) study dealing with worker isolation. They found that individuals tend to direct interactions toward status superiors and status equals. Ties disclosed by members of the respondents in this study showed that interactions were based upon "peer" relationships or on the ability to gain expertise from one another.

In summary, the ties disclosed are consistent with Perpetuation Theory. As a result, it could be predicted that the maintenance of existing ties and the inability for new members to form ties with members of the association will increase the likelihood that cleavages will occur within the association. As these subgroups form, the likelihood of opposing viewpoints and a resulting lack of cohesiveness will increase. As the group divides, the collective strength will diminish.

CHAPTER V
SUMMARY, CONCLUSIONS, RECOMMENDATIONS,
IMPLICATIONS, AND COMMENTARY

The area school delivery system in the state of Oklahoma provides the citizens of the state a great opportunity to participate in vocational-technical training. The development and success of the system can be attributed to two factors: the leadership of the 29 area school superintendents at their own schools and the combined leadership these individuals represent through the AVTS superintendents association. This chapter includes a summary, conclusions, recommendations, implications, and commentary gleaned from the data compiled in this study as it relates to the projected future of the organization.

Summary of the Study

This study was conducted using the membership of the AVTS superintendents association as it was in the spring of 1999. Membership in this organization is limited to the superintendents of the existing area vocational-technical schools in the state of Oklahoma and the primary purpose of the association is to provide a forum for leaders from the individual schools to work together on issues affecting the system as a whole.

Purpose

Through the lenses of Network Analysis (Granovetter, 1973, 1976, 1995) and Perpetuation Theory (Braddock, 1980; McPartland & Braddock, 1981; Wells & Crain,

1994), the purpose of this study was to examine the evolution of the AVTS Superintendents Association. Specifically, the following was accomplished:

1. Describe the “ties” (Granovetter, 1973) that exist among members of the AVTS Superintendents Association;
2. Analyze these ties through the lenses of Network Analysis (Granovetter, 1973, 1976, 1995) and Perpetuation Theory (Braddock, 1980; McPartland & Braddock, 1981; Wells & Crain, 1994);
3. Speculate about impact these ties will have on the future of the association;
4. Report other realities that may be revealed; and,
5. Assess the usefulness of these lenses for explaining these perspectives.

To accomplish these purposes, several kinds of data were needed.

Data Needs and Sources

Because the primary focus of the study was to identify and describe relationships that existed among members of the association, the primary data needs pertained to interaction patterns and information which would be useful in describing why these interactions might occur. Because the membership was small, all 29 members of the association as it existed in the spring of 1999 were asked to participate in the study.

Data Collection

Data collection consisted primarily of two methods: a survey and follow-up interviews. All members of the association were asked to complete a survey instrument which consisted of three sections: (1) consent to participate in the study; (2) a section asking for the types of degrees possessed and the number of years work experience in educational settings; and, (3) a section in which participants selected three other members

of the association that they would seek advice from on six different issues. Once survey data was collected, I utilized Network Analysis techniques to identify patterns of relationship that existed. I then conducted follow-up interviews with selected members to gain additional data as to why these relationships might exist. During the interview, participants were asked to focus their responses on the relationship they had identified to exist between one or two other members of the association. Questions were formulated to allow for analysis based upon Granovetter's (1973) four characteristics of ties: reciprocity, intimacy, intensity, and time. All interviews were conducted by telephone, recorded, transcribed, and organized to allow for consistent analysis of the data provided.

Data Organization and Interpretation

Data collected from the survey instrument were formulated into tables to allow for analysis. Demographic data concerning educational experience were simply listed to examine for commonalities. Data concerning work experience in educational settings were grouped according to the following categories: years of experience as an area school superintendent, years of experience as a comprehensive school superintendent, years of experience in other administrative capacities within an area school, and years of experience in other administrative capacities in a comprehensive school. Data were also combined into three other broader categories: total years of administrative experience in area schools, total years of administrative experience in comprehensive schools, and total school administrative experience.

Choices disclosed through the section dealing with who members would seek advice from regarding given issues were organized in table form as well as through the development of a sociogram. Tables included a complete disclosure of choices made as

well as summary representations grouped in several ways. Although 438 total choices were made, the sociogram which was developed depicts only mutual choices made between two members of the association. This depiction allowed for the identification of structural elements within the group as well as serving as reference points for analysis of combined data.

Data Analysis

Data from surveys and interviews were inductively analyzed for content and patterns relevant to the significance of the study. Attempts were made to eliminate personal bias which might exist due to my own familiarity with members of the association. The direction of data analysis, however, was innately influenced by it. Therefore, although the findings of the study are grounded in literature reviewed in Chapter 2 and based upon data revealed by the participants, they are influenced by my knowledge and experience in educational settings.

Summary of Findings

To maintain consistency with the purpose of the study, major findings will be addressed concerning the following:

1. a description of the ties (Granovetter, 1973) that exist among members of the AVTS superintendents association;
2. the usefulness of Network Analysis (Granovetter, 1973, 1976, 1995) and Perpetuation Theory (Braddock, 1980; McPartland & Braddock, 1981; Wells & Crain, 1994) in identifying and describing these ties;
3. speculation about the impact these ties will have on the future of the organization; and

4. the identification of areas for further study.

Description of Ties

Granovetter's (1973) definition which states that a tie consists of the four elements of time, reciprocity, intensity, and intimacy was found to be extremely useful in describing the ties that existed among members of the association. Using this definition, data were obtained and analyzed within an organized framework that allowed a focused analysis.

Because it was assumed that at least some tie would exist between all members of the AVTS superintendents association. This assumption was made based upon the limitation placed upon membership and the size of the organization. The membership of the organization consists of only superintendents of area schools which, at the time of this study, was 29. The purpose of the organization is to provide a forum for the leaders of the 29 area schools to work together on issues affecting the delivery system. Regular meetings of the group provide a forum for this to occur. Through these meetings, at least some interaction between members is forced to occur.

The purpose of this study, however, was to determine which, if any, of the members of the association held greater ties than others. A method, therefore, had to be identified which allowed a degree of depth in differentiating the contextual ties from others. Through the framework provided by Granovetter's (1973) definition, the study was guided and differences could be identified.

In general, the data revealed that the types of ties that existed may be described in two general ways: contextual ties and professional ties. Contextual ties were those which formed due to external factors such as place or time. Through membership in the

association, members had at least some level of interaction with each other due attendance at meetings or other common events. This contact was not based upon a personal commitment to one another nor was it a particularly useful tie in accomplishing the purpose of the organization.

The second type of tie that was identified, professional tie, was that which more closely reflects the elements of Granovetter's (1973) definition (reciprocity, time, intensity, and intimacy) and were viewed as being important in work related issues. The data collected revealed the existence of professional ties but also showed a varying degree of each of the elements.

Of the four elements, time seemed to be the least important. The frequency or duration of contact appeared to have little impact upon the identification of a tie. Reciprocity, on the other hand, seemed to be an important element. A value that participants frequently disclosed when talking about ties was the knowledge or experience that the other member of the tie possessed. Therefore, although none of the participants overtly expressed that they expected a benefit from the relationship, the underlying reason for the tie to exist was that of professional gain or obtaining information which enhanced work performance.

Varying degrees of intensity appeared through the examination of reported ties. Analysis did reveal that common type and length of work experience was a factor in the development of relationships within the organization. The patterns showed that superintendents who shared the same tenure of work experience in similar settings formed ties more often than those with dissimilar tenures. Data also showed that time of

entry into the association might also influence the formation of ties. Length of tenure in the superintendent position was found to be similar in a number of identified ties.

Data revealed through the follow-up interviews provided the primary confirmation that intimacy was also a factor influencing the formation of ties within the association. Through these interviews, almost all participants revealed that they felt they held the same or similar philosophy of education as those they were identified as having professional ties with. Commonality of philosophy seemed to be of major importance.

A conclusion can be made, therefore, that Granovetter's (1973) definition is useful in describing ties that exist among members of an organization. By using the definition as a framework, a method of exploration can be developed to assist in determining explanations for the formation of ties and general descriptions of them.

Network Analysis and Perpetuation Theory

As a technique for collecting and analyzing data regarding the relationships which exist among members of the AVTS superintendents association, Network Analysis (Granovetter, 1973, 1976, 1995) was useful in identifying and then describing the ties that exist. The use of sociometric measures and the subsequent analysis through the development of matrices and sociograms provided a framework and direction for the study. It also allowed an organized methodology to guide the study as a whole. The data revealed that cleavages within the organization do, in fact, exist although common ideology seemed to be that, at least at one time, the group was a close-knit, cohesive unit.

Consistent with Perpetuation Theory (Braddock, 1980; McPartland & Braddock, 1981; Wells & Crain, 1994) the ties that were found to exist within the association were greatly influenced by the settings from which the members had emerged. Commonalties

in type of work experience and length of these experiences were found to have influence on the formation of ties among members of the group. Using a network perspective, analysis indicated that the association represented a weak network; lacking support for the system and focusing on the well-being of individual schools.

The most notable finding in regard to work experiences was the differentiation between members possessing solely area school administrative experience and their counterparts who possessed both area school and comprehensive school experience. Comments emerged through interviews which identified a separation in philosophy dealing with the types of training conducted by the area school; specifically, the commitment to secondary students versus business and industry clients. It was a perception of some members that those schools headed by superintendents with both area school and comprehensive school experience would focus primarily on secondary students and not the needs of business and industry. This was thought by some to be a negative in the future direction of the system.

Another finding relating to Perpetuation Theory (Braddock, 1980; McPartland & Braddock, 1981; Wells & Crain, 1994) was that of date of entry into the system and tenure within. It appeared that those members who became superintendents at approximately the same time tended to establish ties among themselves more often than establishing ties with others. This would indicate that new members joining the group may have a difficult time becoming acclimated and accepted into the organization. This could have a negative influence on the overall cohesiveness and common mission of the organization.

Future of the Organization

The findings in this study revealed several potential implications on the future of the AVTS superintendents association. Although analysis failed to identify the formation of cliques within the organization, the fact that isolates and subsets were identified indicate that there is potentially a threat to the cohesiveness of the organization.

Throughout the literature reviewed, it appears that much of the strength of the vocational system in Oklahoma is attributed to the strength and cohesiveness of past leadership at several levels. The consistency provided by few changes in the state director's position as well as the input provided by the AVTS superintendents association allowed for a consistent building of the system. As changes occur in both areas, however, this consistency may deteriorate.

Without strong leadership during these changes, more opportunity exists for changes in direction of the organization to occur. What was described by early members as a "strong common mission" which served to guide the organization failed to emerge in through this study. In fact, comments made by members through interviews directly expressed the desire for this type of cohesiveness to exist but admitted that it did not. Speculation about the impact of current ties on the future of the organization, therefore, would have to be in the direction of decline. Weak ties that already exist with these outside influences may eventually become stronger as other ties deteriorate.

Areas For Further Study

In this study, interviewees were asked to express their views about the future of vocational education and, specifically, the role they see the AVTS superintendents association playing in that future. Although commonness of responses given indicated some congruence of philosophy, the data provided was more useful in identifying

potential areas for additional research rather than contributing directly to this study. Although each participant felt that the AVTS superintendents association should play a vital role in the future of vocational education, several common themes emerged: (1) there are differences in opinion between the members of the association regarding the overall focus of the area school system, specifically the emphasis given to the following areas: secondary programs, adult enrollment and business and industry training; (2) there is a shared concern about whether the vocational education system will remain a separate entity or become a part of another system such as higher education or common education; and, (3) there is a concern that succession planning needs to be addressed by members of the association in order to develop future leadership for the system.

Implications and Recommendations

For research to be significant, it must: 1) add to or clarify existing theory, 2) add to the knowledge base, and 3) impact practice (Hoy & Miskel, 1991). The following will examine how this study met each of these criteria.

Theory

Network Analysis (Granovetter, 1973, 1976, 1995) and Perpetuation Theory (Braddock, 1980; McPartland & Braddock, 1981; Wells & Crain, 1994) have shown their usefulness in identifying and describing “ties” (Granovetter, 1973) that exist among individuals. These ties can be categorized as “weak” or “strong” but share the common characteristics of some degree of reciprocity, time, intimacy and intensity. Using these elements as a guide, commonalities and differences among individuals involved in the tie can be identified and examined. These theories proved useful in this study.

Research

Research using Network Analysis and Perpetuation Theory has been primarily based upon ties between individuals. These interactions, however, have far reaching implications on the formation, maintenance and functioning of groups. This study added to the existing knowledge base of Network Analysis and Perpetuation Theory research as they pertain to group settings. Future research might examine similar groups outside of the realm of education to determine if consistent findings emerge.

Practice

Given the data from respondents in this study, lack of cohesiveness among the members of the AVTS superintendents association exists. Revealed through the formality of this study, members of the association have the opportunity to take action to remedy this problem which threatens the future of the organization and the system. Data provided shows that although difference in work experience is a factor which, to some degree, influences the way relationships are formed among members of the association, it is not, in itself, a detrimental factor. If used as a means for justifying the lack of cohesiveness that exists, however, it will continue to hinder the working relationship among members and increase the likelihood that outside influences will have a greater impact on the future of the system.

Commentary

When I began this study, my real interest was in providing an objective way of confirming my belief that the future of the vocational-technical education delivery system in Oklahoma was greatly dependent upon the members of the AVTS superintendents association. This belief has developed through my years of experience in vocational

education as well as my intermittent contact with the members of the association collectively and individually. Review of literature pertaining to the history of vocational education in Oklahoma as well as the interaction through this study with members who had greater experience in the system served to confirm this belief.

Prior to the study, I also suspected that the growth of the system as well as changes in leadership at the area school level had both contributed to a changing dynamic within the association. Through informal interaction with members of the association, comments regarding the inability to “get things done” or to “take a stand like we used to” led to my suspicion that, left unaddressed, this change would be ignored by the group and allowed to weaken the system. As my study evolved, I quickly confirmed that the group had changed over time and that there was a certain awareness of the lack of cohesiveness among members. My surprise, however, was that there seemed to be little commitment toward addressing this problem.

As the political climate continues to change and resources continue to be scarce, the future of the vocational system must become someone’s responsibility. As this study was conducted, Roy Peters, the state director of vocational-technical education resigned. It was interesting for me to observe the interaction of the members of the AVTS superintendents association during this time. Rather than providing consistent leadership and offering cohesive input to the State Board of Vocational-Technical Education, the Governor, and Legislators, the membership somewhat divided itself. Only a few members appeared willing to take a strong stance in voicing their opinions about who the successor should be. Others within the association seemed to take the passive stance of not wanting to create an adversarial relationship with those who would be making the

hiring decision. Some of these individuals were the same who, through this study, expressed a strong opinion that the association should play a major role in the future of vocational education. A discrepancy exists between opinion and action of those members.

Although it is my opinion that if any one group has the potential to influence the future of vocational education in Oklahoma it is the association which served as the population of this study. For this to occur, however, a commitment will have to be made among the membership to recognize and capitalize on differences rather than to ignore them. They must be used in a positive way to create a common, future-oriented vision to ensure the future of the system.

REFERENCES

- Alba, R.D. (1973). A graph-theoretic definition of a sociometric clique. Journal of Mathematical Sociology, 3, 113-126.
- Baker, W.E. (1994). Networking smart: How to build relationships for people. New York: McGraw Hill.
- Braddock, J.H. (1980). The perpetuation of segregation across levels of education: A behavioral assessment of the contact-hypothesis. Sociology of Education, 53, 178-186.
- Breiger, R.L., Boorman, S.A., & Arabie, P. (1975). An algorithm for clustering relational data with applications to social network analysis and comparison with multidimensional scaling. Journal of Mathematical Psychology, 12, 328-383.
- Burt, R.S. (1982). Toward a structural theory of action: Network models of social structure, perceptions, and action. New York: Academic Press.
- Burt, R.S. (1976). Positions in networks. Social Forces, 55, 93-122.
- Coombs, G. (1973). Networks and exchange: The role of social relationships in a small voluntary association. Journal of Anthropological Research, 29,(2), 96-112.
- Erlandson, D.A., Harris, E.L., Skipper, B.L., & Allen, S.D. (1993). Doing naturalistic inquiry: A guide to methods. Newbury Park, CA: Sage.
- Fischer, C.S., Jackson, R.M., Stueve, C.A., Gerson, K., & Jones, L.M. (1977) Networks and places. New York: Free Press.
- Forsythe, P. & Hoy, W. (1978). Isolation and alienation in educational organizations. Educational Administration Quarterly, 14,(1), 80-96.

Freeman, L.C., Freeman, S.C., & Michaelson, A.G. (1988). On human social intelligence. Journal of Social and Biological Structures, 11, 415-425.

Granovetter, M. (1976). Network sampling: Some first steps. American Journal of Sociology, 81(6), May, 1287-1303.

Granovetter, M. (1973). The strength of weak ties. American Journal of Sociology, 78, 1360-1380.

Granovetter, M. (1995). Getting a job: A study of contacts and careers (2nd ed.). Chicago: University of Chicago Press.

Gronlund, N.E. (1959). Sociometry in the classroom. New York: Harper and Brothers.

Guba, E.G., & Lincoln, Y.S. (1981). Effective evaluation. San Francisco, CA: Jossey-Bass.

Hartup, W.W. (1998). The peer ecology of popularity. Sociometry Then and Now, 80, Summer, San Jose, CA: Jossey-Bass.

Laumann, E.O., & Knoke, D. (1987). The organizational state: Social choice in national policy domains. Madison, WI: University of Wisconsin Press.

Laumann, E.O., & Pappi, F. (1976). Networks of collective action: A perspective on community influence systems. New York: Academic Press.

Levine, J.H. (1972). The sphere of influence. American Sociological Review, 37, 14-27.

Lincoln, Y.S., & Guba, E.G. (1985). Naturalistic inquiry. Beverly Hills, CA: Sage.

Lindzey, G., & Byrne, D. (1968). Measurement of social choice and interpersonal attractiveness. The Handbook of Social Psychology, 2, 452-525.

Luce, R.D., & Perry, A.D. (1955). A method of matrix analysis of group structure. Psychometrika, 20, 319-327.

McPartland, J.M., & Braddock II, J.H. (1981). Going to college and getting a good job: The impact of desegregation. In W.D. Hawley (Ed.). Effective school desegregation: Equality, quality and feasibility (pp. 141-154). London: Sage.

Merriam, Sharan B. (1988). Case study research in education: A qualitative approach. San Jose, CA: Jossey-Bass Publishers.

Mokken, R.J. (1979). Cliques, clubs, and clans. Quality and Quantity, 13, 161-173.

Moreno, J.L. (1934). Who shall survive?: Foundations of sociometry, group psychotherapy, and sociodrama. Washington, DC: Nervous & Mental Disease Publishing Co. Reprinted in 1953 (Second Edition) and in 1978 (Third Edition) by Beacon House, Inc., Beacon, NY.

Oklahoma Department of Education. (1998). School laws of Oklahoma. Oklahoma City: State Printing Services.

Oklahoma Department of Vocational and Technical Education. (1999). Taking a closer look at the facts. Stillwater, OK: Oklahoma Department of Vocational and Technical Education Printing Services.

Romney, A.K., & Faust, K. (1982). Predicting the structure of a communications network from recalled data. Social Networks, 4, 285-304.

Seidman, S.B., & Foster, B.L. (1978). SONET-I: Social network analysis and modeling system. Social Networks, 2, 85-90.

Stewart, R. P. (1982). Programs for people: Oklahoma vocational education. Oklahoma City, OK: Western Heritage Books.

Wasserman, S., & Faust, K. (1994). Social network analysis. New York: Cambridge University Press.

Wells, A.S., & Crain, R.L. (1994). Perpetuation theory and the long-term effects of school desegregation. Review of Educational Research, 64,(4), 531-555.

Yin, R.K. (1994). Case study research: Design and methods (2nd edition). Thousand Oaks, CA: Sage.

APPENDICES

APPENDIX A
SURVEY INSTRUMENT

RESEARCH CONSENT FORM

"I, _____, agree to participate in the research project conducted by Douglas Ray Major. I understand that the data collected during this study will be used by Mr. Major in order to complete the requirements necessary for the completion of a doctoral program of study in the Educational Leadership program at Oklahoma State University.

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

1. complete the attached survey instrument;
2. provide demographic information on the attached form; and,
3. participate in a follow-up telephone or in-person interview if I am chosen by the researcher to clarify given responses and/or provide additional information regarding the nature of the relationships among members of the AVTS Superintendents Association.

I further understand that:

1. all data collected by the researcher will remain confidential and that access will be limited to only the researcher and his major advisor;
2. prior to presentation, all data will be encoded and pseudonyms will be used in graphical representations of the data;
3. all source data will be destroyed two years following the satisfactory completion of the Ed.D. program by the researcher;
4. this research project is being conducted with the intent of contributing to existing research and knowledge regarding informal group structure.

This project is done as part of an investigation entitled: A network analysis perspective of the relationships among members of the Oklahoma Area Vocational-Technical School Superintendents Association.

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

I may contact Douglas Major at telephone number 405-372-7831 or 405-377-3333. I may also contact Sharon Bacher, 203 Whitehurst, Oklahoma State University, Stillwater, OK 74078; telephone number: (405) 744-5700.

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

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

Signed: _____
Signature of Subject

Overview

Network Analysis is a social science technique useful in examining interactions among individuals in a group. The purpose of this questionnaire is to collect data related to the interaction patterns and education/work experience of the members of the Oklahoma Area Vocational-Technical School Superintendents Association.

Three types of information are requested:

- 1) Responses on a brief survey instrument;
- 2) The completion of a demographic questionnaire related to education and work experience; and,
- 3) Upon analysis of initial data, follow-up interviews may be requested with some respondents.

NOTE: Prior to publication, all data will be encoded to maintain the anonymity of respondents.

Area Vocational Technical School Superintendents Association
Membership List (4/19/99)

(A complete list of members was provided to respondents. The list has been removed to maintain the confidentiality of the respondents)

Instructions:

Using the list of AVTS Superintendents Association members provided on page 2, please identify the three individuals you would most likely seek advice from regarding the area given.

Note: Please list the individuals' names or put their corresponding numbers in the blank. (Example: The first name on the list may be denoted by name or the number "1".)

I would most likely seek advice from these three superintendents regarding...

A. Legislative issues:

- 1. _____
- 2. _____
- 3. _____

B. Finance/budgeting issues:

- 1. _____
- 2. _____
- 3. _____

C. Personnel issues:

- 1. _____
- 2. _____
- 3. _____

D. Curriculum issues:

- 1. _____
- 2. _____
- 3. _____

E. The future of vocational education:

- 1. _____
- 2. _____
- 3. _____

F. Social issues:

- 1. _____
- 2. _____
- 3. _____

G. Other: _____
(please specify)

- 1. _____
- 2. _____
- 3. _____

Please complete the demographic information on page 4.

DEMOGRAPHIC INFORMATION

Please complete the following information:

Name: _____

Number of years in current position _____

Degree(s) Earned _____

Institution(s) _____

Work Experience in Education

<u><i>Position</i></u>	<u><i># of Years</i></u>
------------------------	--------------------------

Superintendent

Current AVTS	_____
--------------	-------

Other AVTSs	_____
-------------	-------

Comprehensive School	_____
----------------------	-------

Other Administrative Positions

Area School	_____	Position Title(s): _____
-------------	-------	--------------------------

Comprehensive School	_____	Position Title(s): _____
----------------------	-------	--------------------------

Other	_____	Position: _____
-------	-------	-----------------

Teaching Experience

Area School	_____	Subject(s): _____
-------------	-------	-------------------

Comprehensive School	_____	Subject(s): _____
----------------------	-------	-------------------

Other Teaching Experience	_____	Subject(s): _____
---------------------------	-------	-------------------

<i>Other Work Experience</i>	_____	Please describe: _____
------------------------------	-------	------------------------

Thank you for your response and your participation in my research project!

APPENDIX B
INSTITUTIONAL REVIEW BOARD APPROVAL

OKLAHOMA STATE UNIVERSITY
INSTITUTIONAL REVIEW BOARD

Date: April 19, 1999 IRB #: ED-99-113

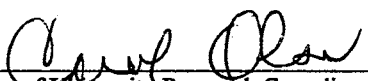
Proposal Title: "A NETWORK ANALYSIS PERSPECTIVE OF THE RELATIONSHIPS
AMONG MEMBERS OF THE OKLAHOMA AREA VOCATIONAL-
TECHNICAL SCHOOL SUPERINTENDENTS ASSOCIATION"

Principal Investigator(s): Adrienne Hyle
Douglas Major

Reviewed and Processed as: Exempt

Approval Status Recommended by Reviewer(s): Approved

Signature:



Carol Olson, Director of University Research Compliance

April 19, 1999

Date

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

APPENDIX C
A SUMMARY REPRESENTATION OF ALL CHOICES
MADE BY RESPONDENTS ON EACH OF THE SIX ISSUES

APPENDIX C
 A SUMMARY REPRESENTATION OF ALL CHOICES
 MADE BY RESPONDENTS ON EACH OF THE SIX ISSUES

		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	@	&	#
Legislative	Q			3	2													0	1											
Budget	Q					1										2		0		3										
Personnel	Q							2	3									0		1										
Curriculum	Q		3															0					1				2			
Future	Q			3														0		2			1							
Social	Q							2	3									0		1										
Legislative	R		3		1	2														0										
Budget	R			3											2				0										1	
Personnel	R										1							2	0								3			
Curriculum	R			2			1												0								3			
Future	R		1																0								3	2		
Social	R					1	2								3				0											
Legislative	S				3													2	1	0										
Budget	S			3		1														0			2							
Personnel	S																	1		0							2	3		
Curriculum	S											2						1	3	0										
Future	S				3													1		0										2
Social	S															3	1		0					2						
Legislative	T					3													2		0				1					
Budget	T									3				2						0										1
Personnel	T									2			3	1						0										
Curriculum	T		2																	0			3	1						
Future	T		3		1										2					0										
Social	T											1			3			2		0										
Legislative	U							3									2			1	0									
Budget	U					1											2			3	0									
Personnel	U					2											1			0							3			
Curriculum	U					1		3									2			0										
Future	U														2			1		0									3	
Social	U	3															1			0							2			
Legislative	V				1	3											2						0							
Budget	V				1	2			3												0									
Personnel	V			2		1												3					0							
Curriculum	V																			2	3		0					1		
Future	V		1												2								0						3	
Social	V													2				1	3				0							
Legislative	W																							0						
Budget	W																							0						
Personnel	W																							0						
Curriculum	W																							0						
Future	W																							0						
Social	W																							0						
Legislative	X			3																					0	1		2		
Budget	X		3	2																					0			1		
Personnel	X			2																					0	3		1		
Curriculum	X			2											3										0			1		
Future	X			1																					0	2		3		
Social	X			2																					0	3		1		

VITA ✓

DOUGLAS RAY MAJOR

Candidate for the Degree of

Doctor of Education

Thesis: A NETWORK ANALYSIS PERSPECTIVE OF THE RELATIONSHIPS
AMONG MEMBERS OF THE OKLAHOMA AREA VOCATIONAL-
TECHNICAL SCHOOL SUPERINTENDENTS ASSOCIATION

Major Field: Educational Administration

Biographical

Education: Graduated from Kingfisher High School, Kingfisher, Oklahoma in May 1982; received Bachelor of Science degree in Agriculture Education from Oklahoma State University, Stillwater, Oklahoma, in May 1985; received Master of Science degree in Agriculture Education from Oklahoma State University, Stillwater, Oklahoma, in July, 1991; completed the requirements for the Doctor of Education degree in Educational Administration from Oklahoma State University, Stillwater, Oklahoma, in July, 1999.

Experience: Taught vocational agriculture for Anadarko Public Schools, Anadarko, Oklahoma, from 1985-1987. Employed at Meridian Technology Center, Stillwater, Oklahoma, from 1987 to present. Current position is Assistant Superintendent. Previous positions include: Director, Business and Industry Services; Director, Finance; Director, Short-Term Adult Programs; Director, Student Services; Assistant Director, Short-Term Adult Programs; Administrative Intern

Professional Memberships: American Association of Career and Technical Education; Association for Supervision and Curriculum Development; Oklahoma Vocational Association, Oklahoma Council of Local Administrators.