

A FRAME THEORY ANALYSIS OF OKLAHOMA  
TECHNOLOGY CENTER SUPERINTENDENTS'  
LEADERSHIP CONSTRUCTS

By

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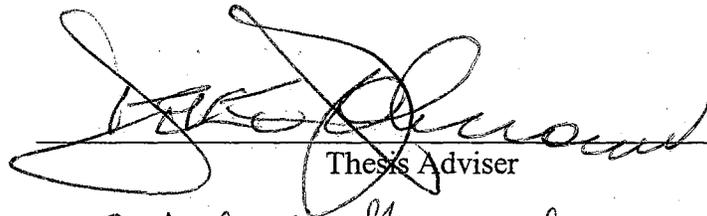
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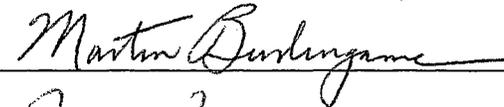
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## TABLE OF CONTENTS

Chapter	Page
I. INTRODUCTION .....	1
Statement of the Problem .....	4
Purpose of the Study.....	5
Theoretical Framework .....	6
Structural Frame .....	6
Human Resource Frame .....	7
Political Frame .....	7
Symbolic Frame .....	8
Research Design.....	8
Quantitative Design.....	9
Qualitative Design.....	9
Limitations.....	10
Definitions .....	10
Significance of the Study .....	11
Theory .....	11
Research .....	11
Practice .....	12
Summary .....	12
Outline of Study .....	13
II. REVIEW OF LITERATURE .....	14
Overview .....	14
Educational Leadership .....	14
Career and Technology Education .....	28
Oklahoma Technology Centers.....	28
Role of Technology Center Superintendents.....	31
Oklahoma Technology Center Superintendents' Association.....	34
Summary .....	35
III. METHODOLOGY .....	37
Rationale for Using Both Quantitative and Qualitative Methodology.....	37
Data Collection Procedure.....	39
Population.....	41
Role of the Researcher .....	41
Instrumentation.....	43

Chapter	Page
Written Narrative.....	44
Survey Instrument .....	44
Quantitative Component.....	46
Research Design .....	46
Data Analysis .....	46
Qualitative Component.....	51
Type of Design Used.....	51
Data Analysis Procedure .....	52
Summary .....	53
 IV. DATA ANALYSIS AND FINDINGS .....	 54
Qualitative Analysis .....	54
Number of Frames Used.....	55
Written Narrative Frames Used.....	56
Implications for Written Narrative Findings and Relation to Years of Experience .....	58
Demographic Impact .....	59
Quantitative Analysis .....	62
Behavior and Leadership Style Perceptions .....	63
Variance of Study.....	66
Demographic Impact on the Behavior and Leadership Styles .....	66
Effectiveness of Members Relating to the Frames.....	69
Perception of Word Description.....	72
Triangulation of Quantitative and Qualitative Data .....	74
Summary .....	77
 V. SUMMARY, RECOMMENDATIONS, IMPLICATIONS, AND CONCLUSIONS .....	 79
Summary of the Study.....	79
Purpose .....	80
Data Needs and Sources .....	80
Data Collection.....	81
Data Organization and Interpretation .....	82
Data Analysis .....	83
Summary of Findings .....	83
Usefulness of the Frames Analysis .....	84
Impact of Frames Theory Analysis .....	85
Future Indicators for the Association .....	87
Areas for Further Study.....	88
Implications and Recommendations .....	89
Theory .....	90
Research .....	90

Chapter	Page
Practice .....	91
Commentary .....	91
REFERENCES .....	93
APPENDIXES .....	98
APPENDIX A – SURVEY INSTRUMENT.....	99
APPENDIX B – WRITTEN LEADERSHIP INCIDENT INSTRUMENT .....	107
APPENDIX C – LETTER ACCOMPANYING THE INSTRUMENTS .....	109
APPENDIX D – RESEARCHERS USED OR INFLUENCED BY BOLMAN AND DEAL .....	111
APPENDIX E – WRITTEN LEADERSHIP INCIDENT CODING CRITERIA.....	115
APPENDIX F – RELIABILITY OF THE SURVEY INSTRUMENT .....	117
APPENDIX G – MEAN SCORES .....	125
APPENDIX H – FREQUENCY DISTRIBUTIONS .....	127
APPENDIX I – INSTITUTIONAL REVIEW BOARD .....	129

## LIST OF TABLES

Table	Page
1. Examples of Multiple-Frame Research .....	25
2. Four Interpretations of Organizational Processes.....	27
3. Bolman and Deal's Factor Analysis of Leadership Orientations Data.....	48
4. Number of Frames Used by the Members.....	55
5. Number of Members Utilizing Each Frame .....	56
6. Participants and Specific Frames Being Utilized .....	57
7. Participant's Years as Member of Association and Frames Indicated in Written Descriptions .....	60
8. Participant's Years in Career and Technology Education and Frames Indicated in Written Descriptions.....	61
9. Group Behavior Style Mean Scores .....	63
10. Group Leadership Style Mean Scores .....	64
11. Demographic Information Pertaining to Years of Service .....	67
12. Years as Superintendent Compared to Behavior Means .....	68
13. Years as Superintendent Compared to Leadership Style Means.....	69
14. Demographic Information Pertaining to Evaluation as a Manager and Leader .....	71
15. One to One Comparison of Written Narrative, Behavioral Styles, and Leadership Styles .....	75

## LIST OF FIGURES

Figure	Page
1. Mean Comparisons.....	65
2. Descriptors of Respondent.....	73

## CHAPTER I

### INTRODUCTION

The robust Oklahoma Career and Technology Education (a.k.a. Oklahoma Vocational-Technical Education) system can be attributed to the strength, consistency, and dedication of its leadership. The Oklahoma Career and Technology Education is a fairly young educational entity that began development with the enactment of the Federal Vocational Act of 1963. The Federal Vocational Act of 1963 made it possible for Oklahoma to expand the concept of vocational education through the implementation of Area Vocational-Technical Schools (Steward, 1982) now called Technology Centers (HB 1214, 2001). J. B. Perky in 1964 served as the first state director and was soon followed in 1967 by Dr. Francis Tuttle. The system only has had four directors since its inception: J. B. Perky, Dr. Francis Tuttle, Dr. Roy Peters and currently Dr. Ann Benson. Through their leadership, Technology Centers have been able to grow throughout the state of Oklahoma with 29 school districts and 54 campuses.

“Early in the formation of the area school concept, the original superintendents recognized their crucial role in the building of the [vocational] system” (Major, 1999, p. 4). Through understanding this critical juncture, the Area Vocational-Technical School Superintendents’ Association, now called Career and Technology Center Superintendents’ Association, was formed. The association members, which consist of the 29 technology center superintendents, are still a major factor in the continued

development and support of Career and Technology Education in Oklahoma. However, as the prevalence of the technology centers grew and the system continues to mature, certain factors need to be considered.

Major (1999) outlines some of these factors in his dissertation study of A Network Analysis Perspective of the Relationships Among Members of the Oklahoma Area Vocational-Technical School Superintendents' 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 (p. 6).

Challenging the culture and value system of the association may cause undesirable results for technology centers. For example *In Search of Excellence* (Peters and Waterman, 1982), focuses on the relationship between a company's culture and its performance. All indications from the book show a significant correlation between a cohesive culture and producing results. In *Corporate Culture*, Deal and Kennedy emphasize that strong cultures produce results (Bolman and Deal, 1984). Being able to understand the leadership constructs will help the current and future members better understand the culture and values of the association.

To measure these constructs Bolman and Deal (1984, 1991, 1994) have developed a frame analysis that does not limit itself to just one school of thought. Their analysis is

based on four frames: structural, human resource, political, and symbolic. Since the frames do not focus in a primary theory area, the collection of frames can expand on viewpoints allowing for a more thorough understanding of experiences.

Some of the combined theory areas are bureaucratic, social systems, political, and symbolic. The bureaucratic theory is best outlined by Max Weber:

Experience tends universally to show that the purely bureaucratic type of administrative organization—that is, the monocratic variety of bureaucracy—is, from a purely technical point of view, capable of attaining the highest degree of efficiency and is in this sense formally the most rational known means of carrying out imperative control over human beings. It is superior to any other form in precision, in stability, in the stringency of its discipline, and in its reliability. It thus makes possible a particularly high degree of calculability of results for the heads of the organization and for those acting in relation to it. It is finally superior both in intensive efficiency and in the scope of its operations, and is formally capable of application to all kinds of administrative tasks (Gaynor, 1998, p. 39).

Weber pointed out that the bureaucratic approach was more efficient than the preindustrial modes it displaced, but warned that ultimately society might not like the “iron cage” it was constructing for itself (Hickman ed., 1998, p. 61).

McGregor realized the shortcomings of the bureaucratic theory and opened “the human side of the enterprise” (Gaynor, 1998, p. 53). Douglas McGregor (1960) took Maslow’s theory of motivation and produced Theory X and Theory Y (Bolman and Deal, 1991). Theory X and Theory Y uplifted the human component in organizations. It exemplifies the need for leaders to understand and respond to the needs that human beings bring to the organization. In responding to the people of an organization, leaders are required to make decisions and explore the organization’s problems.

In the analysis of the problems and making decisions, the political systems theory is applicable. Gaynor (1998) suggests “the political systems model provides an unusually

useful framework for looking at organizational problems in terms of the conflicts and cross-pressures on decision makers emanating from powerful individuals and groups with different, frequently conflicting, interests and goals” (p. 72). The political systems model encourages us to organize our thinking in terms of analytical categories and use them in seeking to understand the situation from its particular perspective.

Another component of analysis besides the analytical categories is through the culture of the organization. The symbolic theories focus on problems of meaning in organizations (Bolman and Deal, 1984, p. 2). The symbolic components can range from myths and stories to rituals and ceremonies. The traditional views of an organization emphasize reality and objectivity.

Through these various outlines of certain theoretical basis, it is evident the encompassing nature of the Bolman and Deal frames. The depth and breadth of the frames can provide an analysis that does not view leadership through one lens. With the diversity of the Oklahoma Technology Center Superintendents’ Association, multiple lenses of analysis will be beneficial. The members of the association are facing changing times and the commonalities they once shared as a group are being challenged. Through the utilization of the frames, a better understanding of the association can be produced to help continue the strength of its leadership.

#### Statement of the Problem

As the technology center superintendents’ association has matured over the past 30 years, the association has experienced a change in members that has opened new areas of experience both in educational backgrounds and work experience. With the diverse

backgrounds and educational experiences of each superintendent, multiple approaches to similar challenges can be found throughout the system. For current and new superintendents entering the system, there is a lack of research specific to the Oklahoma technology center superintendency. The areas lacking in research are concerning the leadership constructs of the current association and the influence, if any, of an individual's educational and work background upon the role of being a technology center superintendent. The lack of research focusing on the leadership of Oklahoma technology centers is a problem, because in order to maintain a prominent Career and Technology Education system, a practical research base must be established to help prepare future technology center superintendents and to help existing technology superintendents evaluate their leadership skills within the system. Through the use of the Bolman and Deal frames a practical research base can be established to assist the association members in identifying their constructs and providing reference for future members.

#### Purpose of the Study

With the utilization of the frames theory (Bolman & Deal, 1984, 1991, 1994), the purpose of this study was to examine the frames, by which the members of the Oklahoma Technology Center Superintendents' Association operate. In the course of analyzing the operational frames of the members the following objectives were met:

1. Outline the four potential frames for which the members operate and describe the prominence of each frame;

2. Analyze these frames among the group through the utilization of a survey and a written incident which correlate to the frames of Bolman and Deal (1984, 1991, 1994);
3. Report the realities of frame utilization that were revealed;
4. Speculate about the impact of the prominent frames and the future of potential superintendents;
5. Assess the usefulness of this evaluation for continued research in building a database of information for perspective members of the Superintendents' Association.

### Theoretical Framework

Organizational theories each focus primarily on one concept. Each typically emphasizes the need to perform certain tasks or behaviors to be successful within the specific concept. For the purpose of this study, the frames developed by Bolman and Deal (1984, 1991) will be utilized. The importance of using the frames helps to elevate the encroachment of finding the one best theory to explain a leader's values. The frames are broken into four categories: structural frame, human resource frame, political frame, and symbolic frame.

#### Structural Frame

The structural frame emphasizes the importance of formal roles and relationships (Bolman and Deal, 1984). The structure of an organization may commonly be depicted in an organizational chart, which is utilized to create the environment. Structural leaders

value analysis and data, keep their eye on the bottom line, set clear directions, hold people accountable for results, and try to solve organizational problems with new policies and rules (Bolman and Deal, 1994). Problems may arise when the structure does not fit the situation, at this point; some form of reorganization is needed to remedy the problem.

### Human Resource Frame

The human resource frame establishes its territory because organizations are inhabited by people (Bolman and Deal, 1984). Individuals in an organization have needs, feelings, prejudices, skills and limitations. The human resource leaders value relationships and seek to lead through facilitation and empowerment (Bolman and Deal, 1994). Problems may arise when human needs are throttled; at this point, the key is to find the organizational form that will allow for individuals to get the work done and feel good about the work they are doing.

### Political Frame

The political frame views organizations as arenas of scarce resources where power and influence are constantly having bearing on the allocation of resources among individuals or groups (Bolman and Deal, 1984). Conflict is expected because of the differences among the individuals and groups. The conflicts also may change as the issues or interests of the individuals and groups change. Political leaders are advocates and negotiators who spend much of their time networking, creating coalitions, building a power base and negotiating situations (Bolman and Deal, 1994). Problems arise when

power is unevenly distributed; at this point, political skill must be utilized to develop solutions.

### Symbolic Frame

The symbolic frame abandons the assumptions of rationality that appear in each of the other frames and treats the organization as theater or carnival (Bolman and Deal, 1984). Organizations are viewed as being held together not by goals and policies, but by shared values and culture. Symbolic leaders pay diligent attention to myth, ritual, ceremony, stories, shared values, and other symbolic forms (Bolman and Deal, 1994). Problems arise when symbols lose their meaning and/or ceremonies and rituals lose the potency within the organizations; at this point, improvements are made through symbols to rebuild the shared values and culture.

### Research Design

In the investigation of superintendents' leadership frames, both quantitative and qualitative research were utilized. Quantitative research methodology was beneficial in examining the relationship between the frames of the superintendents and background and educational experiences. The regression analysis was utilized to determine the impact of the different frames on leadership effectiveness. Qualitative research methodology was beneficial in bringing meaning to how the superintendents think and frame their experience (Anderson, 1998). Through utilizing both of the methods, the following research questions were answered:

1. What frames do technology center superintendents utilize?

2. How many frames do technology center superintendents utilize?
3. Is there a correlation between the demographics of a superintendent with the leadership and/or management effectiveness they possess?
4. How do technology center superintendents compare to other educational leaders who have been analyzed with the frames theory?

### Quantitative Design

The survey instrument, Leadership Orientations, was employed. Bolman and Deal developed the instrument in 1990. The main focus of the instrument was to exhibit the frames being utilized by the superintendents. The instrument allowed for the superintendents to rate themselves to depict which frames are prevalent in their working environment. An example of the survey can be found in Appendix A.

### Qualitative Design

Superintendents were asked to write an account of a challenging leadership incident in which they have been involved (Appendix B). The incident was then analyzed by criteria for coding frame responses produced by Bolman and Deal (1994). The coding provided the information to determine how many and what frames the superintendents utilize. The information was taken and analyzed by the criteria outlined in Appendix E.

## Limitations

Limitations to this study may be found in the following areas: the extent to which the superintendents provided written explanation of their challenging incidents and the ability of the researcher to generalize the concluding data. Delimitation was established to limit the written response to no more than two or three paragraphs and no verbal communication was used for obtaining data.

## Definitions

The following definitions assisted the researcher in explaining terms and concepts used within the study.

Career and Technology Education - (a.k.a. Vocational-Technical Education) – An educational system established to provide occupational training for individuals. The system offers programs and services in 29 technology center districts operating on 54 campuses, 400 comprehensive school districts, 25 skill centers and three juvenile facilities.

Challenges – Concerns or problems that are perceived as obstacles or barriers in achieving goals or accomplishing the mission.

Leader – a person who has commanding authority or influence, guide, or conductor

Leadership characteristics – Attributes, skills, and knowledge that may contribute to the success of a person becoming, or performing as, a leader.

Manager – one who conducts business and/or directs individuals; supervisor of work

Technology center - (a.k.a. Area Vocational-Technical School) – Schools established by the Vocational Education Act of 1963 and subsequent amendments thereto provide training for high school students; persons who have completed or left high school; persons employed but need training or retraining to achieve stability or advancement in employment; and for persons who are academically or socioeconomically disadvantaged or who have physical or mental disabilities that prevent them from succeeding in regular vocational education programs (Oklahoma Department of Vocational-Technical Education, 1998).

### Significance of the Study

The findings of this study contributed to the areas of theory, research, and practice.

### Theory

Theoretically, the frames perspective (Bolman and Deal, 1984, 1991, 1994) allowed for an explanation of Oklahoma technology center superintendents' abilities through both quantitative and qualitative research. The theoretical base for the frames theory helped to clarify and augment leadership for superintendents with a more realistic approach to situations in educational settings.

### Research

The model of frames adds to the knowledge base of leadership characteristics; however, it brings together many concepts that are isolated in other theories. With the

diversity of superintendents in the association, this model alludes to the larger scope of being able to adapt and work within the organization's environment. The frames' research lends an overall perspective of the constructs that may be used among leaders. By applying this research base to the superintendents, a better understanding of the leadership characteristics in Oklahoma technology centers was developed.

### Practice

The use of the frames theory enhanced the practice of superintendents and provided insight into the frames in which they operate or may need to operate. Through the establishment of the utilized frames, practice by superintendents can be enriched by a concerted effort to better understand their functionality within an educational institution. The frames also can enhance practices for future superintendents by providing a comprehensive outline of the frames most practiced by the members of the association.

### Summary

The intent of this study was to use the frames theory by Bolman and Deal (1984, 1991, 1994) to determine the frame in which members of the Oklahoma Technology Center Superintendents' Association operate. In addition, the building of a knowledge base for current and future members was desired, along with showing some comparisons to other educational leaders who have been analyzed with the same frames theory.

## Outline of Study

- I. Chapter I includes the introduction, statement of the problem, purpose of the study, theoretical framework, research design, limitations, definitions, and significance of the study.
- II. Chapter II includes an overview and relevant information regarding educational leadership, career and technology education and the role of the technology center superintendent.
- III. Chapter III represents the data collected and the methodologies utilized to obtain the data.
- IV. Chapter IV contains the analysis and interpretation of the data.
- V. Chapter V includes recommendations, implications, and conclusions.

## CHAPTER II

### REVIEW OF LITERATURE

#### Overview

This literature review encompasses a variety of topics including educational leadership, a review of the application of the frames presented by Bolman and Deal as they apply to educational leadership, the concept of career and technology education, and the role of technology center superintendents.

#### Educational Leadership

James Clawson states that things are not what they used to be, especially when it comes to understanding what it means to be an effective leader (1999, p. 1). More recently, in a speech at Hillsdale College, H. Norman Schwarzkopf, commander of coalition forces in Operation Desert Storm, said, "The main ingredient of good leadership is good character". This is because leadership involves conduct, and conduct is determined by values. You may call these values by many names. Ethics, morality, and integrity come to mind. But this much is clear: "Values are what make us who we are" (Barnes, 2001, p. 27). Educational leadership is not immune from this interpretation. The Institute for Educational Leadership (2001) through the report of the task force on school district leadership reported that superintendents have seen their responsibilities

multiply. Transforming components and variable situations lend more complexity to the concept of educational leadership.

The leaders' of the educational systems "primary contribution is in the recognition of good ideas, the support of those ideas, and the willingness to challenge the system in order to get new products, processes, and services adopted" (Kouzes and Posner, 1987, p. 8). Educational leaders have many obstacles and forces that challenge their ability to be successful in providing an education for students.

During the first half of the 20<sup>th</sup> century, says the conventional wisdom, district management could be defined by "the four B's"; Bonds, Budgets, Buses and Buildings. By the 1970s, it had become "the four R's"—Race, Resources, Relationships and Rules—as heretofore mostly ignored groups, such as members of minority groups, teachers, students, and communities began asserting themselves. Priorities shifted again in the 1980s when the contemporary school reform movement gained traction. Today, district leaders must concern themselves with a host of different concerns: "The four A's": Academic standards, Accountability, Autonomy and Ambiguity and "the five C's": Collaboration, Communication, Connection, Child advocacy and Community building. Now more than ever before, districts must maintain constant contact with a bewildering array of internal and external stakeholders to share information and request feedback on a range of issues from closing schools in inclement weather to core issues about what students are expected to learn (Institute for Educational Leadership 2001, p. 2).

Leading Organizations outlines four major areas that impact the functioning of organizational leadership: power, purpose, structure, and performance (Hickman, ed., 1998). The definition of these components have changed or influenced results in different ways for organizations from the 20<sup>th</sup> Century to the 21<sup>st</sup> Century. From Max Weber's bureaucracy model to Brunsson and Olsen's reform of public sector institutions, the impact for educational leaders continues to change and defining the concept of leadership becomes more challenging. Many educational theories outline the potential

leadership characteristics that will help an educational leader achieve the goals and objectives of the organization.

Houston (2001) suggests reality for superintendents who wish to be successful in the future will need to transform their approach to their job to meet the needs of the 21<sup>st</sup> Century (p. 431). A leadership theory that culminates this type of approach can be defined as transformational leadership. The term transformational leadership was first coined in Downton's *Rebel Leadership* in 1973 (Northouse, 1997); however, its emergence as an important approach to leadership began with a classic work by the political sociologist James MacGregor Burns titled *Leadership* (1978). He writes of leaders as those individuals who tap the motives of followers in order to better reach the goals of leaders and followers (p. 18). Burns' (1978) concept was further refined and presented in a formal theory by Bass and Avolio (1994). Transformational leadership has continued to grow in popularity and to provide models for leadership programs.

Transformational leadership is an expansion of transactional leadership. Transactional leadership emphasizes the exchange that takes place among members of the organization. The transactional leaders give specific conditions and guidelines to meet specific requirements. Transformational leaders, on the other hand, go farther with leadership than just simple exchanges. Bass and Avolio (1994) express certain things that will be seen from transformational leaders:

- stimulate interest among colleagues and followers to view their work from new perspectives,
- generate awareness of the mission or vision of the team and organization,

- develop colleagues and followers to higher levels of ability and potential, and
- motivate colleagues and followers to look beyond their own interests toward those that will benefit the group.

With descriptors such as stimulate and motivate, transformational leadership has been explained as being interchangeable with charismatic leadership. House published the charismatic theory in 1976; it described leaders as having a special gift and having the ability to do extraordinary things (Northouse, 1997). The component of the two theories that emphasizes the same characteristics is in fact, leaders work on the interest of what is best for the organization and not their own personal interest. A good example of this is by John F. Kennedy, “Ask not what your country can do for you; ask what you can do for your country.” Some components of transformational leadership are similar with charismatic leadership; however, transformational leadership expands beyond charismatic leadership, which has been expanded by Bennis and Nanus (1985) and Tichy and DeVanna (1990). Bennis and Nanus (1985) list four common strategies of organizations led by transformational leaders: clear vision of the future state of their organization, social architects for their organization, created trust within their organization, and creative deployment of self through positive self-regard. Tichy and DeVanna (1990) add the component of a change process with the other characteristics described by previous researchers.

With a substantial outline of the components of transformational leadership, it is critical also to understand how all of these characteristics actually work.

“Transformational leaders set out to empower followers and nurture them to change.

They attempt to raise the consciousness in individuals and to get them to transcend their own self-interests for the sake of others” (Northouse, 1997, p. 142). Transformational leaders can be seen as role models that are self-confident and competent and express strong-ideals. They also can be seen as being out front in an organization, becoming a major part of the organization’s culture and helping to shape the meaning of the organization.

A way to measure an individual’s transformational leadership qualities is through the Multifactor Leadership Questionnaire (MLQ), which was initially developed by Bass (1985). The MLQ covers seven factors related to transformational leadership and has been made into an abbreviated survey by Bass and Avolio (1992) now called the MLQ-6S. The measurement allows individuals to better understand their ratings compared to the factors of a transformational leader and distinguish which characteristics they may or may not possess.

In focusing on characteristics of leaders, Marlene Johnson (1994) points out the inconclusive data concerning the impact of demographics of an educational leader and the correlation to his or her success within the organization (p. 13). However, other theories have determined that the situation one is operating under may have a significant impact on his or her role as a leader. Situational theory is one the theories that can help to explain this phenomenon. It is one of the most widely recognized approaches to leadership and was developed by Hersey and Blanchard (1969). It is based on Reddin’s 3-D Management Style Theory (Northouse, 1997, p. 53). Situational theory focuses on leadership in certain situations. Neuman and Simmons (2000) emphasize that there is no model of effective leadership that can be applied in all situations (p. 10). Therefore,

situational theory is broken down into four areas to help adapt to differing situations: delegating, supporting, coaching, and directing. The leader must diagnose the situation to better implement the appropriate developmental level of the theory. Choosing the level for the situation is critical. As Goldberg (2001) distilled through 43 different interviews with educational leaders, “no two jobs are alike, no two leaders have precisely the same set of talents, circumstances and culture are peculiar to an organization or place, and the fit between an individual and the work to be done is everything (p. 760). Making the fit will determine the success or failure within the situation.

To take one step further among the situational aspects, Fiedler (1967) attempted to demonstrate that effective leadership is contingent upon the favorableness of the group-task situation (Johnson 1994, p. 10). The focus involved the analysis of the relationship between the leader and followers, power associated with the leadership position, and the structure of the situation. Meyer and Scott (1983) discuss the structure of educational organizations and reiterated the influence of power, followers, and the structure of the situation and the impact sustained by the educational organization.

The situational impact of educational leadership can be measured with a variety of instruments. One approach is through the presentation of a situation with four possible solutions. The solutions listed will determine the developmental level an individual would use to solve or react to the situation. Further analysis can be conducted on the answers as illustrated through Game Plan for Leadership and the One Minute Manager by Blanchard, Zigarmi and Zigarmi (1992, p. 5). Another instrument applicable to issues facing situations is by Fielder and Chemers (1984). The instrument measures the leadership style by having an individual describe a co-worker with whom one has

difficulty working. The analysis provides insight into the impact of the situations on leaders and provides information for a leader to develop a personal profile.

As exhibited through each of the theories expressed, focusing on one dominating component is the theme. It is apparent that multiple theories of leadership focus on one point of leadership to substantiate the theory each advocates. In the Handbook for Effective Department Leadership, Sergiovanni (1984) underscores the problems of only viewing one perspective:

When viewing administrative theory and practice from a single perspective, certain aspects of organization and administration are emphasized and better understood but other aspects are neglected or given secondary status. The efficiency perspective did not give adequate attention to the human side of life in educational organizations. Such issues as individual personality and human needs and such conditions as job satisfaction, motivation, and morale seemed to be clearly secondary (p. 4).

Through trying to broaden this perspective, Bolman and Deal have consolidated the major schools of organizational thought into four relatively coherent perspectives (1984). The different perspectives are referred to as frames. The frames characterize different views on situations. All individuals have a personal outlook or perspective on their interpretation of a situation. The frames take this personal aspect and help to determine which action may be best suited for the situation. Bolman and Deal emphasize the importance of individuals to understand their own frames, instead of trying to mold themselves to fit into a specific theory or limited perspective (1984). The four frames--structural, human resource, political, and symbolic--are based on theory and research and provide a broader range of options for individuals.

The importance of looking beyond one theory is supported by Jago (1982):

... it makes little sense to view leadership theories as necessarily competing theories... no leadership theory can rightfully claim comprehensive treatment of the entire domain of leadership phenomena. Because at least some empirical support is available for each perspective, leadership appears to be a far more complex set of cause-and-effect relationships than suggested by any one of the comparatively simple theoretical models offered to date (p. 330).

Through the utilization of the Bolman and Deal frames aspects of multiple theories are implied to establish a better-rounded evaluation of leadership orientations.

The structural frame focuses on the context in which individuals work together. This frame has perceptions of a rigid bureaucracy or endless red tape. However, in reality the structural approach is a complex and subtle one that encompasses the freewheeling, loosely structured entrepreneurial task force, as well as, the railway company and the postal department (Bolman and Deal, 1991). Being able to understand the complexities and the variety of structural possibilities of an organization can help to promote structures that not only meet the needs of the organization, but also the needs of the people within the organization. The structural perspective primarily focuses on the following assumptions:

1. Organizations exist primarily to accomplish established goals.
2. For any organization, a structural form can be designed and implemented to fit its particular set of circumstances (such as goals, strategies, environment, technology, and people).
3. Organizations work most effectively when environmental turbulence and personal preferences are constrained by norms of rationality. (Structure ensures that people focus on getting the job done rather than on doing whatever they please).
4. Specialization permits higher levels of individual expertise and performance.
5. Coordination and control are essential to effectiveness. (Depending on the task and environment, coordination may be achieved through authority, rules, policies, standard operating procedure, information systems, meetings, lateral relationships, or a variety of more informal techniques).

6. Organizational problems typically originate from inappropriate structures or inadequate systems and can be resolved through restructuring or developing new systems (Bolman and Deal, 1991, p. 48).

The human resource frame evaluates the fit between the organization and the individual. As emphasized in Maslow's hierarchy of needs, human beings have needs, and meeting the needs or not can either energize or deflate their behavior. When the fit between the needs of an organization and the needs of an individual is good, both benefit: individuals find satisfaction and meaning in work, while the organization is able to make effective use of the talent and energy of the individuals (Bolman and Deal, 1991). The opposite is true if the fit between the organization and the individual is not good. Through utilization of this frame an effort can be made to help in developing the human resource management within an organization. The human resource perspective primarily focuses on the following assumptions:

1. Organizations exist to serve human needs (rather than the reverse).
2. Organizations and people need each other. (Organizations need ideas, energy, and talent; people need careers, salaries, and work opportunities.)
3. When the fit between the individual and the organization is poor, one or both will suffer: individuals will be exploited, or will seek to exploit the organizations, or both.
4. A good fit between individual and organization benefits both: human beings find meaningful and satisfying work, and organizations get the human talent and energy that they need (Bolman and Deal, 1991, p. 121).

The political frame perspective suggests that the goals, structure, and policies of an organization emerge from an ongoing process of bargaining and negotiating among the major interest groups (Bolman and Deal, 1991). The interest groups may have legitimate power or they may just be able to get and use power better than the other groups. The use of power and politics within this frame does not automatically assign a

negative connotation. The power may be building a more just or efficient environment for the organization. One important factor to the political frame is that it is a continual exercise within an organization. The political perspective primarily focuses on the following assumptions:

1. Organizations are coalitions composed of varied individuals and interest groups (for example, hierarchical levels, departments, professional groups, gender and ethnic subgroups).
2. There are enduring differences among individuals and groups in their values, preferences, beliefs, information, and perceptions of reality. Such differences change slowly, if at all.
3. Most of the important decisions in organizations involve the allocation of scarce resources: they are decisions about who gets what.
4. Because of scarce resources and enduring differences, conflict is central to organizational dynamics, and power is the most important resource.
5. Organizational goals and decisions emerge from bargaining, negotiation, and jockeying for position among members of different coalitions (Bolman and Deal, 1991, p. 186).

The symbolic frame focuses on the impact of rituals, ceremonies, myths, and stories within an organization. *Feast of Fools*, (1969, p. 13) summarizes the importance of symbolism in modern life. “Our links to yesterday and tomorrow depend also on the aesthetic, emotional, and symbolic aspects of human life—on saga, play and celebration. Without festival and fantasy, man would not really be a historical being at all” (Bolman and Deal, 1991, p. 271). The symbolic components of an organization are a critical component to its existence and cannot be overlooked. The symbolic perspective primarily focuses on the following assumptions:

1. What is most important about any event is not what happened but what it means.
2. Events and meanings are loosely coupled: the same events can have very different meanings for different people because of differences in the schema that they use to interpret their experience.

3. Many of the most significant events and processes in organizations are ambiguous or uncertain—it is often difficult or impossible to know what happened, why it happened, or what will happen next.
4. The greater the ambiguity and uncertainty, the harder it is to use rational approaches to analysis, problem solving, and decision making.
5. Faced with uncertainty and ambiguity, human beings create symbols to resolve confusion, increase predictability, and provide direction. (Events themselves may remain illogical, random, fluid, and meaningless, but human symbols make them seem otherwise.)
6. Many organizational events and processes are important more for what they express than for what they produce: They are secular myths, rituals, ceremonies, and sagas that help people find meaning and order in their experience (Bolman and Deal, 1991, p. 244).

The four frames provide Bolman and Deal (1984) an opportunity to continue to express their argument for conceptual pluralism in organizational research and theory.

Sergiovanni (1984) supports the pluralistic view as follows:

Administrative and organizational analysis in schools and universities, and in other public organizations should be viewed as a multiple-perspective activity. Theories of administration, therefore, should not be viewed as competing, with the thought that one best view emerges. When viewed from a multiple perspective, administration is better able to illuminate and explain certain aspects of the problem administrators face. Increased understanding depends upon the use of several theories, preferably in an integrated way (p. 1).

Bolman and Deal (1991) have illustrated that exact point expressed by Sergiovanni (1984) in Table 1.

TABLE 1  
EXAMPLES OF MULTIPLE-FRAME RESEARCH

<i>Perspectives</i>	<i>Authors</i>	<i>Salient Concepts</i>
Structural and human resource	Lawrence and Lorsch (1967)	Differentiation and integration
Structural and political	Cyert and March (1963)	Sequential attention to goals
Human resource and political	Alderfer and Smith (1990)	Embedded intergroups
Human resource and symbolic	Argyris and Schön (1978)	Theories for action
Human resource and symbolic	Bennis and Nanus (1985)	Empowerment, vision
Political and symbolic	Cohen and March (1974)	Organized anarchy
Structural, human resource, and political	Kanter (1977)	Opportunity, power, numbers
Structural, human resource, and political	Kotter (1982)	Agendas, relationships, networks
Four frames	Kanter (1983)	Segmentation, empowerment, power skills, culture
Four frames	Perrow (1986)	Bureaucracy, human relations, institutional school, power
Four frames	Birnbaum (1988)	Collegial, bureaucratic, political, anarchic

(p. 311)

Table 1 provides examples of multiple-frame research, which allows for more than one perspective to be utilized in an analysis.

Utilizing more than one perspective or defining perspectives being implemented is in the perception of the definer. Ronald Heifetz (1994) expresses the consequences of perception can influence the end result by leaders and authority figures getting attacked, dismissed, silenced, and sometimes assassinated because they come to represent loss, real or *perceived*, to those members of the community who feel that they have gotten, or

might get, the bad end of a bargain (p. 236). Bolman and Deal (1984) caution towards the implications of these diverse interpretations for organizational life, because potential problems may arise. For example in Table 2, the outline of the four interpretations for each process is listed.

In the framing analysis, it is important to remember that it can be applied in multiple ways. Multiple realities allow for a better understanding of the multiple people an individual interacts with on a daily basis. All individuals view situations through different lenses and need to be taken into account as diagnosis is being examined.

Through these multiple accounts of leadership perceptions, it is important to understand that leadership is a complex concept. Heifetz (1994) uses four criteria to develop a definition of leadership that takes values into account. First, the definition must sufficiently resemble current cultural assumptions so that, when feasible, one's normal understanding of what it means to lead will apply; second, the definition should be practical, so that practitioners can make use of it; third, it should point toward socially useful activities; fourth, the concept should offer a broad definition of social usefulness (p. 19). Bolman and Deal (1992) take the complexity of leadership and provide a conceptual framework for individuals to assess a significant determinant of which frames are salient. This opens a door of opportunity for educational leadership, as it pertains to Oklahoma technology center superintendents, to build a stronger knowledge base for current and aspiring members of the Oklahoma Technology Center Superintendents' Association.

TABLE 2

## FOUR INTERPRETATIONS OF ORGANIZATIONAL PROCESSES

Process	Structural	Human Resource	Political	Symbolic
Planning	Strategies to set objectives and coordinate resources	Gatherings to promote participation	Arenas to air conflicts and realign power	Ritual to signal responsibility, produce a symbol, and negotiate meaning
Decision Making	Rational sequence to produce right decision	Open process to produce commitment	Opportunity to gain or exercise power	Ritual to provide comfort and support until decision happens
Reorganizing	Realign roles and responsibilities to fit tasks and environment	Maintain a balance between human needs and formal roles	Redistribute power and form new coalitions	Maintain an image of accountability and responsiveness; negotiate new social order
Evaluating	Basis for distributing rewards or penalties to control performance	Basis for helping individuals grow and improve	Opportunity to exercise power	Occasion to play roles in shared ritual
Approaching conflict	Maintain organizational goals by having authorities resolve conflict	Develop relationships by having individuals conform conflict	Develop power by bargaining, forcing, or manipulating to win	Develop shared values and use conflict to negotiate meaning
Goal setting	Keep organization headed in a direction	Keep people involved and communication open	Provide opportunity for individuals or groups to make interest known	Develop symbols and shared values
Communication	Transmit facts and information	Exchange, information, needs, feelings	Vehicle for influencing or manipulating others	Telling stories
Meeting	Formalized place to make decisions	Informal place to be involved, share feelings	Competitive place to win points	Sacred place to celebrate and transform the culture
Motivating	Monetary rewards	Growth, self-actualization	Coercion, manipulation, seduction	Symbols—plaques—perks—T-shirts

(Bolman and Deal, 1984, p. 247)

## Career and Technology Education

Career and Technology Education was once known as vocational-technical education. In the pioneering days of vocational education, Booker T. Washington (1938) said, "Education is meant to make us give satisfaction and to get satisfaction out of giving it. It is meant to make us get happiness out of service to our fellows. And until we get to the point where we can get happiness and supreme satisfaction of helping our fellows, we are not truly educated" (Gordon 1999, p. 20). Washington believed that vocational education would build economic self-reliance. Vocational-technical education contributes to economic development. Through vocational-technical education, multiple businesses and industries are empowered to develop their workforce with continuing education and enhanced skills to stay competitive in today's marketplace. Besides just business and industry reaping the benefits of vocational-technical education, individual students are enriched with the ability to further develop their career goals and obtain skills to augment their job marketability.

### Oklahoma Technology Centers

In Oklahoma, the area vocational-technical school concept began to blossom with the enactment of the Federal Act of 1963 and the later amendments. This concept added a new dimension to vocational education. Certain procedures had to be followed for an area vocational-technical school to exist. Some of the procedures included:

Permissive legislation to create a new taxing district to construct and operate an area vocational school had to be secured by constitutional amendment; this first was authorized by the legislature through enactment of a law calling for statewide vote. Also, the time was required to give the State Board of Vocational-Technical Education (assigned as the regulatory

entity) to set up rules and regulations for creating such districts and governing their operation. This was to include the timing of elections locally, when the amendment passed, so that citizens: (1) could choose whether or not to have an area district, (2) elect a five-member board to govern the district, (3) pass a bond issue for building construction, and (4) hold a millage election (normally five mills) to fund the operation (Stewart, 1984, p. 137).

The concept of area vocational-technical schools has been a predominant fixture in the educational system of Oklahoma. The name of area vocational-technical schools was changed to technology centers in 2001 (HB 1214). The change was part of an image building campaign to enhance the understanding of vocational-technical education by changing the system name to Career and Technology Education.

The system is supported by the Oklahoma Department of Career and Technology Education, which is located in the north-central Oklahoma town of Stillwater. The department provides leadership, resources, and assures standards of excellence for a comprehensive statewide system of career and technology education. That system offers programs and services in 29 technology center districts operating on 54 campuses, 400 comprehensive school districts, 25 skill centers and three juvenile facilities. The Oklahoma Department of Career and Technology Education (2001) provides a comprehensive outline of each of programs and services within the system:

- A Comprehensive School Program
  1. Allows students to learn skills in a hands-on environment
  2. Has more than 120,700 enrollments in grades 6-12 annually
  3. Provides career and technology education at 565 comprehensive schools
- A Statewide Network of Technology Centers

1. Provides schools of choice for high school students and adults with approximately 122,600 enrollments
  2. Provides access to 97 percent of state's population
- Business and Industry Training
    1. Attracts new industry and helps existing businesses expand and prosper
    2. Trains nearly 250,000 people in programs customized for employers
    3. Enhances the success of Oklahoma's entrepreneurs and small business owners
  - Inmate Training in CareerTech Skills Centers
    1. Operates 25 technical training centers inside prison walls for minimum-security inmates
    2. Operates programs in juvenile facilities
    3. Helps inmates re-enter society as productive citizens

The vision of the system is to be the world's best career and technology education system. The State Board of Career and Technology Education is the governing body of the Oklahoma Department of Career and Technology Education (ODCTE). ODCTE works closely with the State Department of Education and the State Regents for Higher Education to provide a seamless educational system for all Oklahomans.

## Role of Technology Center Superintendents

The role and responsibilities of a technology center superintendent are difficult to describe, because of the vast variations in each superintendent and the different environments in which the technology centers operate. No list of their functions could be complete, nor are the duties of one school superintendent exactly like those of another (Phillips, 1985).

The minimal qualifications and duties are defined by The Oklahoma Administrative Code (Title 780): Rules for Vocational and Technical Education for technology center superintendents (1998). The technology center superintendent shall be the principal administrative officer of the technology center. They shall be responsible for the organization, curriculum development, evaluation, and improvement of the technology center programs. Technology Center superintendents shall maintain close contact with the employment services, advisory committees, potential employers, and all agencies and institutions relative to employment needs and job opportunities in order that training may be closely coordinated with current needs and anticipated opportunities in the employment market. They shall evaluate programs continuously and bring about changes and improvements, which will ensure that students will obtain the occupational skills and knowledge for which instruction is being provided. Technology center superintendents shall be responsible for maintaining a system of complete and accurate records and shall make such financial, statistical, and descriptive reports as may be required by the State Board (Enlow, 2000, p. 14-15).

To obtain a standard technology center administrator credential, certain requirements must be met. They are outlined on the Oklahoma Department of Career and Technology Education (2001) website

(<http://www.okcareertech.org/avts/pdffiles/Application.pdf>):

1. Shall have a valid administrator's certificate (principal or superintendent) from the State Department of Education as defined in the Teacher Education Certification and Assessment Handbook.

2. Shall have at least five years of experience as a teacher, supervisor or administrator of an approved career and technology education program.
3. Shall hold a valid Oklahoma vocational teaching certificate”
4. Persons not holding a valid Oklahoma vocational teaching certificate shall be issued a provisional technology center credential and be given three years from the date of issuance to complete the requirements for a standard technology center credential. The issuance of the technology center standard shall be based on the completion of a minimum of eight semester hours from three of the following areas: History and Philosophy of Career and Technology Education, Technology Center Finance, Curriculum for Career and Technology Education, Career and Technology Program Planning.

Once the above criteria are completed a technology center administrator’s credential may be obtained; however, there are multiple categories for which a superintendent must function.

Houston (2001) states that school leaders of every stripe must face a number of broad social challenges that are reshaping our society and the way children learn (p. 430). As an Oklahoma Technology Center superintendent an individual is not immune to these challenges. Sarason (1996) illustrates that the observer is not neutral because of the attempt to gain perspective on the structural characteristics of a school culture, particularly as they have bearing on the processes and problems of change (p. 29). Each school district will face varying problems, because the constituents of each district differ, just as all individuals maintain their own perspectives.

Major (1999) measured the individual perspectives of the Oklahoma Technology Centers Association members by using a network analysis and perpetuation theory. In Major's (1999) findings the individuals that shared the same background and work experience were more likely to establish ties and the individuals entering the association at the same time also were able to form similar ties. "Although the 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" (Major, 1999, p. 75).

Enlow (2000) followed with another study specific to the association to outline challenges and characteristics facing the members of the association. Multiple challenges were outlined: funding, curriculum requirements, enrollment, and public image (Enlow, 2000). With these challenges the study pointed to two characteristics the members overwhelmingly chose as vital to the role of a technology center superintendent: visionary and ethical (Enlow, 2000).

Through the previous studies, the results seemed to be narrow; however, certain aspects can be built upon in determining the constructs of leadership being used. The Institute for Educational Leadership (2001) emanates that "leaders must be able to establish expectations or norms of teaching and learning for administrators and teachers alike while building organizational systems to support them and maintaining a professional climate that encourages practitioners to continue to learn" (p. 8). Not only do superintendents need to be aware of the environment, but they also need to provide opportunity for development among the institution and the individuals that help to keep it strong. Neuman and Fisher (2000) offer leadership strategies for effective schools:

develop a shared vision, determine clear priorities, promote continuous professional learning, link schools to community assets, provide a strong accountability system, and reorganize the school/district structure (p. 10).

Whether it is developing a systematic approach to education or building a clear vision—four aspects: purpose, values, image, and goals (Blanchard, Hybels, & Hodges, 1999, p. 122)—a superintendent is challenged to be a leader who can see the content of learning changes dramatically (Houston, 2001, p. 431), while continuing to provide an environment where education can take place. Bolman and Deal (2001) conclude that every organization is a family, whether caring or dysfunctional (p. 108), and must be handled with understanding.

#### Oklahoma Technology Center Superintendents' Association

The Oklahoma Technology Center Superintendents' Association (the association) was formed in approximately 1967 as a support group for a few of the technology center superintendents. The association also served as an advisory group to Dr. Francis Tuttle, who was the state director of the Oklahoma Department of Vocational-Technical Education starting in 1967. The association's primary work was to build an area school delivery system that did not exist and to work together on common issues facing vocational-technical education (Major, 1999).

The association continues to act in an advisory capacity to the state director and works together in the continuous development of career and technology education. The association also monitors and assists in the development of legislative issues affecting career and technology education and works together to implement quality training

programs on a state-wide basis (Major, 1999). The association has a membership of 29, which is restricted to the technology center superintendents. The membership encompasses all 54 technology center campuses across the state of Oklahoma.

### Summary

Leadership theories have provided individuals with vast amounts of information to culminate through in determining which leadership approach is best suited for their situation. Educators have used these theories to help them become better leaders; however, educational leadership is still very complex. The continually changing needs of the environment make the forces upon educational leaders volatile. To help educational leaders better understand some of the constraints they may be facing, Bolman and Deal's frames provide a broad and practical understanding of being in a work environment. The frames open a new door for leadership theory by combining multiple perspectives and allowing for the individual leader to chose which perspective best fits his or her needs.

With changes occurring and leadership being critical to the foundation, career and technology education must be aware of and maintain a strong leadership. The changing of their name internally and keeping the notion of career and technology education alive externally are prevalent challenges faced by the leadership. Working through these challenges and helping to keep the Oklahoma technology centers functioning is partially the responsibility of the members of the Oklahoma Career and Technology Center Superintendents' Association.

Along with this responsibility, the superintendents' scope spans a variety of areas; however, it is critical the superintendents realize their own understanding of functioning

within the system. By utilizing the frames by Bolman and Deal, information will be available for current and aspiring superintendents in helping to assess the role of the superintendent as it relates to the Oklahoma technology center system. Goldberg (2001) outlines the basic understanding of educational leadership:

Jerry Patterson published a small book on the superintendency called The Anguish of Leadership. While the book is interesting and affecting and contains several practical suggestions, it supplies no powerful statements on what to do, let alone how to do it, in order to ensure success. Neither Lambert nor Patterson has it right or wrong. Both of them wrote good books that might be helpful to many people. The problem is that there is no algorithm for success in educational leadership. It's just too complex, too varied, and too subject to change for any singular answer (p. 761).

Therefore, any information that can be gathered to assist educational leaders in their quest for practical suggestions and building a base of information is well received.

## CHAPTER III

### METHODOLOGY

This chapter contains the procedures and methods used in conducting this study. Through the lenses of the Bolman and Deal frames (1984, 1991, 1994), the purpose of this study was to examine the frames being utilized by the Oklahoma Technology Center Superintendents' Association (the association). In the analysis both qualitative and quantitative methodology were used. This approach added complexity to the design by using the advantages of both the qualitative and quantitative paradigms (Creswell, 1994, p. 178).

#### Rationale for Using Both Quantitative and Qualitative Methodology

The rationale for using both quantitative and qualitative methodology was to incorporate the two dominant research paradigms of positivist and post-positivist. The scientific method of research has been dominant in influencing educational research. It stems from the branch of philosophy known as logical positivism (Anderson, 1998, p. 4). This type of research implies that things are meaningful if they can be verified and observed. This approach to research is primarily a quantitative model. In the quantitative model, the use of statistical and mathematical equations are implemented to analyze the

data. These equations permit the interpretation of the data to support the positivist's view of the results being free of the researcher's biases. The critics of this type of phenomenon support the importance of human behaviors and would be considered supporters of post-positivism.

The post-positivists imply that intentions and feelings of human behavior are important to the knowledge being sought. This type of research is primarily a qualitative model. This approach is holistic rather than controlling and it relies on the researcher rather than precise measurement instruments as the major means of gathering data (Anderson, 1998, p. 5). Through qualitative research, it allows for the researcher to describe and interpret some human phenomenon by using the words of the respondents. The interpretation of the respondents' environments and perceptions can be examined through the use of qualitative methodology.

Both of the methodologies offer unique inquiries for educational research. It is important to understand that use of both quantitative and qualitative methods may occur in a single study (Gay, 1996; Deeve, 1997; Crowl, 1996). The utilization of the two methodologies allow for triangulation to occur within the research study. This in turn provides the foundation of both the quantitative and qualitative paradigms utilized within educational research to encapsulate the data analysis of this study. In this study the quantitative research focuses on using a survey as an instrument for data collection and the qualitative research focuses on using a written narrative as an instrument for data collection.

## Data Collection Procedure

Both the survey instrument and written narrative instrument (Appendix A and Appendix B) were distributed to the members of the Oklahoma Technology Center Superintendents' Association at a monthly association meeting with the support of the association's president. The members not present at the meeting were mailed the survey packet with an explanation of the process and they were simultaneously sent electronic mail describing the research in detail with a follow-up telephone call.

The instruments were coded for the members to allow for an anonymous response. The coding of the respondents did not follow an alphabetical or characteristic breakdown to assist in providing anonymity to the respondents. The coding for the respondents was devised in a manner that would allow for the respondents to not be easily identified by the researcher and by the readers.

Each member received a letter (Appendix C) and the instruments, which were enclosed in an envelope with a self-addressed, stamped envelope to mail back the responses. Included in front of the survey instrument each member was given a consent form (Appendix A) to sign before completing the instruments. It was emphasized that the data collected from the instruments would be used only for this research project and information shared would remain confidential. It also was explained that the data being collected were being used to analyze the characteristics of the membership according to the frame approach by Bolman and Deal (1984, 1991, and 1994).

Participants were asked to complete the survey by the instructions presented on the sections of the instrument. With the written narrative instrument, they were asked to provide a written narrative of a sample leadership incident they had experienced while

being a member of the superintendents' association. The members were given the opportunity to contact the researcher at any time through the process if they had any questions concerning the concept of the written description or the survey instrument. Members needing clarification of the written narrative contacted the researcher, but no inquiry for clarification was requested for the survey instrument.

The members were given two weeks to return the responses to the researcher. Within two days of the two-week deadline, electronic mail was sent to the membership thanking those who had responded and encouraging those who had not responded to complete the instruments and return them by the designated due date. The first tabulation of responses denoted a 59% return rate (17 out of 29) for the surveys and a 34% return rate (10 out of 29) for the written narratives.

After the designated completion date, the non-respondents were personally called and follow-up electronic mail was conducted to encourage participation from the members in the study. The second tabulation of responses denoted a 76% return rate (22 out of 29) for the surveys and a 48% return rate (14 out of 29) for the written narratives. The second tabulation captured more respondents for each area.

A final electronic mail request was sent to non-respondents with a response requested upon receipt to allow for a final opportunity to receive the completed instruments from the members. The third tabulation of responses denoted an 83% return rate (24 out of 29) for the surveys and a 55% return rate (16 out of 29) for the written narratives. No further follow-up was conducted and the data analyzed consisted of 24 survey instruments and 16 written narrative instruments.

Some of the members who completed the survey instrument elected not to complete the written narrative. Some of the members said, they felt uncomfortable in participating in the study due to their limited experience with the association.

### Population

The population for this survey was restricted to the membership of the Oklahoma Technology Center Superintendents' Association. The association started with the first technology center superintendents offering support and guidance for the state agency. The establishment of the membership began in approximately 1967 and 1968.

The membership of the association is restricted to the 29 technology center superintendents, which encompasses 54 campuses within the state of Oklahoma. The association elects officers to provide leadership and guidance for the technology center system. However, it is a relatively informal organization that holds monthly association meetings to allow for collaboration and sharing of information among the technology centers. The association also works with the state agency in monitoring, assisting and working together to continue the development of quality education statewide.

### Role of the Researcher

I, the researcher, have formally worked in career and technology education for 8 years. I worked with the business and industry services division and currently am the Director of Technology where I provide leadership and guidance in areas dealing with technology-related issues throughout the school. My educational beliefs have been greatly influenced by my life experiences, as well as the philosophy shared by those I

have been associated with through my educational and work experiences. As I continue to develop as an educator, the collaboration with other educators, students, and business professionals continues to enrich my philosophy as an educator and an individual.

I strongly believe that career and technology education provides unique opportunities for individuals, communities, and businesses to meet their needs. This type of education is a “people” enterprise based on relationships. The Oklahoma technology centers provide the “people” enterprise within the state to help promote the relationships within an educational environment.

To promote growth, educational enrichment, and economic development, I feel that the technology center superintendents’ association must understand the fundamental workings of the membership. With the association members having great influence on the future of the technology centers, it is vital for an information base and foundation of understanding the individual characteristics of the membership be established. “The key to unlocking greater leadership potential can be found only when you seek to understand the service relationship” (Kouzes & Posner, 1993, p. 11). I feel that the key to unlocking the continued development of the technology centers is through better understanding the characteristics of the membership of the superintendents’ association. It is important to me that the information presented can be supportive in the continued success of the association. Without the continued strength of the association, the future of Oklahoma technology centers is uncertain. I feel strongly in the structure of career and technology education and believe it is a vital component of the educational system in Oklahoma.

Through my assumptions, it is apparent the effect this view has had on the development of my research. With my assumptions and theoretical perspectives, it is

evident that my perception and life experiences with career and technology education are existent within this research study.

### Instrumentation

The Leadership Orientation, Self (Appendix A) and sample written narrative (Appendix B) instruments developed by Bolman and Deal were selected as the most appropriate instruments for this study. The instruments were selected after interest was generated from the researcher's reading of the 1992 article in the *Educational Administration Quarterly* dealing with the concept of the Bolman and Deal frames. The reading examined the relationship between management and leadership for school administrators in the United States and in Singapore. Use of the frame analysis research revealed the cognitive patterns that lead to success as a manager and success as a leader are not the same patterns. The importance of the cognitive patterns expressed through Bolman and Deal's qualitative and quantitative research is based on two general hypotheses:

(1) capacity to reframe is a critical issue and (2) leadership is contextual (1992).

Other researchers (Appendix D) have utilized Bolman and Deal's frame approach to capture the essence of the hypothesis and build upon the frames approach. These studies ignited the researcher's interest to investigate this particular approach among the membership of the Oklahoma Technology Center Superintendents' Association that has not been evaluated within this scope.

### Written Narrative

The written narrative instrument (Appendix B) allowed for the uncovering of how the members think and frame their experiences. This instrument opened the avenue for qualitative research. “Our qualitative work focuses on the implicit frames in administrators’ accounts of their experience” (Bolman and Deal, 1992).

The qualitative analysis permitted for two questions to be answered:

1. How many frames do the superintendents use?
2. Which frames do they use?

The design engaged the respondents to provide open-ended information in a written narrative. The criteria for coding the frame responses (Appendix E) allowed the researcher to make reliable judgments based on the narratives provided by the members. In the data analysis the specific procedure for utilizing the criteria for coding was discussed.

### Survey Instrument

The survey instrument allowed for the comparison and relationship between the frames and members to be examined. The reliability of the survey instrument can be found in Appendix F. The survey instrument covered multiple areas of analysis for assisting in the understanding of the frames being used by the members of the association. The survey was broken into four sections to conduct the analysis: behaviors, leadership style, overall rating as manager or leader, and background information. The behavior’s section consisted of a rating scale that was consistent with the frames (structural, human resource, political, and symbolic) throughout the first 32 questions.

For example, structural items were 1,5, 9, 13, 17, 21, 25, 29; human resource items were 2, 6, 10, 14, 18, 22, 26, 30; political items were 3, 7, 11, 15, 19, 23, 27, 31; and symbolic items were 4, 8, 12, 16, 20, 24, 28, 32. The rating was defined as 1 – Never, 2 – Occasionally, 3 – Sometimes, 4 – Often, and 5 – Always. The respondents chose the number that best applied the describing statement as true for them.

The following six questions (1-6) focused on obtaining information on leadership styles. The questions were set in a force-choice sequence. Each question was arranged to meet the same sequence of frames as the behavior section. For example, a. was equivalent to structural, b. was equivalent to human resource, c. was equivalent to political, and d. was equivalent to symbolic. The numerical options were 4 – best describes you through 1 – which is least like you.

To add to the leadership information, section III provided an opportunity for the members to rate themselves as an effective manager and as an effective leader. The scale presented was a Likert scale with 1 to 2 being the bottom 20%, 3 being the middle 20%, and 4 to 5 being the top 20%.

The final section of background information provided the researcher with demographic information that was used in the analysis. The demographic information included: current years as a technology center superintendent, total years as a technology center superintendent, total years in the CareerTech system, and total years in common education.

## Quantitative Component

### Research Design

The quantitative methodology encompassed the use of the Leadership Orientation (Self) (Appendix A), which had 24 of 29 respondents for an 83% return rate. Lee Bolman and Terrance Deal have copyrighted the survey instrument; however, the researcher obtained written permission to use the instrument from Lee Bolman on February 26, 2001 through electronic mail. The implementation of this particular design provided triangulation within all components of this research. Triangulation was achieved by comparing the qualitative data with the quantitative data to substantiate a more complex interpretation of the frames in relation to the members of the superintendents' association.

### Data Analysis

The main questions answered through the quantitative method were:

1. How do the members perceive themselves?
2. Do certain frames point to effectiveness?
3. How does demographics relate to the leadership orientations?

Bolman and Deal (1990) tested the reliability of the instrument based on 1,309 colleague ratings for a multisector sample of managers in business and education (Appendix F).

Bolman and Deal (1992) also used factor analysis to see how much responses clustered in ways that were consistent with the frames. Table 3 shows the results of Singapore School Administrators factor analysis. They utilize a conventional procedure of principal

components analysis, followed by varimax rotation of all factors with an eigenvalue  $>1$  (Bolman and Deal, 1992). The analysis produces four factors that align with the conceptual definitions of the frames. The same type of factor analysis also can be found in United States higher education administrators analysis in *Images of Leadership* (Bolman and Deal, 1991).

The researcher from the quantitative data produced a table to outline the mean scores for each member as it related to behavior and leadership styles (Appendix G). The breakdown offered eight scores for each frame for each participant in the behavior analysis. The leadership style section only allowed for five responses from each member to apply to each frame. Also from the leadership section, question six, was isolated from the other responses to determine the primary perception of the membership as described by rank ordering one-word descriptors.

The reason for analyzing the results in two sections was to establish the consistency of the frames and to show a correlation between the leadership and behavior aspects of the survey. To aid in the correlation, a grouped frequency distribution (Appendix H) was conducted to show the frequency of responses to the specific frames. Each number in the frequency distribution was isolated, as its own interval, so the complete outline could be displayed in a more accurate manner (Bartz, 1976). Simple frequency counts can help to identify patterns (Glesne, 1999).

TABLE 3  
 BOLMAN AND DEAL'S FACTOR ANALYSIS OF  
 LEADERSHIP ORIENTATIONS DATA

Factor and items	Factor Loading
<b>Structural</b>	
Strongly emphasizes careful planning and clear timelines	.74
Develops and implements clear, logical procedures	.72
Uses logical analysis and careful thinking	.70
Approaches problems with facts and logic	.68
Has extraordinary attention to detail	.67
Thinks very clearly and logically	.65
Strongly believes in clear chain of command	.60
<b>Human Resource</b>	
Consistently helpful and responsive to others	.76
High support and concern for others	.74
Listens well	.72
Builds trust through open, collaborative relationships	.71
Gives personal recognition	.56
Generates loyalty and enthusiasm	.54
Fosters high participation in decisions	.52
<b>Political</b>	
Gets support from people with influence and power	.72
Skillful, shrewd negotiator	.68
Politically very sensitive and skillful	.67
Unusually persuasive and influential	.60
Develops alliances to build base of support	.59
Succeeds in face of conflict and opposition	.54
<b>Symbolic</b>	
Is an inspiration to others	.69
Inspires others to do their best	.64
Is highly charismatic	.64
Communicates strong and challenging sense of mission	.60
Highly imaginative and creative	.59
Influential model of organizational aspirations and values	.56
Sees beyond current realities to create new opportunities	.50

To assist in understanding the patterns the researcher conducted further computation of the data. To obtain the most from the analysis, multiple statistical approaches were conducted. The primary tools used were analysis of variance (ANOVA) for within subjects and the mean scores of the respondents as they related to the technology center's association. It was also critical to analyze past research conducted by Bolman and Deal (1991, 1994) to substantiate the most beneficial approach to computing the data.

The within design allowed for the same person who served within more than one frame to be analyzed. The goal of the within design was to conclude with one measurement for each condition that it could be utilized to indicate if the information was significant in the findings (Bartz, 1976). The results of the within analysis did produce some significant findings in the F ratios; however, to complete the breakdown of the within design with post-hoc analyses were deviating from the purpose of the study.

One of the components of the within results that validated the study was the indication of the significance of the study and the power of the interpretation by using omega squared. Keppel (1991) outlined the omega squared index and its effects in behavioral and social sciences as:

A "small" effect is an experiment that produces an  $\omega^2_A$  of .01.

A "medium" effect is an experiment that produces an  $\omega^2_A$  of .06.

A "large" effect is an experiment that produces an  $\omega^2_A$  of .15 or greater (p. 66).

The strength of the survey instrument in the behavior section had an effect of omega squared at 0.213. The strength of the survey instrument in the leadership styles section had an effect of omega squared at 0.394. With Keppel's interpretations the effects would be classified among the large effect, therefore, constituted as having

meaning. The complete strength cannot be determined by the omega squared, but this indicator with the F ratio indicated that the interpretations of the findings were relevant.

The chosen data for analysis were the mean scores. The mean scores provided a clearer interpretation of the data. The analysis focused on the comparison of the mean scores within the differing degrees of the survey instrument. The researcher validated the computations of the mean scores through three different processes. The first process was by using hand calculations to verify the mean scores for each respondent and then each group of responses. Once this process was complete the raw data was then placed into a computer-generated spreadsheet to determine the individual mean scores and the group mean scores. The final validation of the mean scores and accurate computation of raw data was through utilizing the software program devised by Dr. Janice Williams Miller at Oklahoma State University to determine mean scores for groups of numbers. Once all three levels of verification were complete the numbers were reported.

To assist in meeting the focus of this study and producing relevant findings, the year of experience comparisons were broken down into two groups: 1 to 9 years and 10 plus years. Comparison tables of mean scores were established between the years at each group level to show the use of the frames as it related to the demographic information.

The demographic information that could not be evaluated was gender. The gender information provided could not be compared because of the lack of females in the membership. The distribution among gender did not allow for an adequate amount of information for a comparison.

The final area of quantitative data analysis in the study was on the members' perception of their effectiveness as a leader and as a manager. The members' scores were calculated into mean scores and frequency distributions to show the correlation of how the members' ranked themselves at being effective.

## Qualitative Component

### Type of Design Used

The qualitative design of the study complemented the quantitative component of the study.

Creswell (1994) outlines advantages and disadvantages of this type of design to research:

1. Enables the researcher to obtain the language and words of informants.
2. Can be accessed at a time convenient to the researcher-an unobtrusive source of information.
3. Represents data that are thoughtful in that informants have given attention to compiling
4. As written evidence, it saves a researcher the time and expense of transcribing.
5. May be protected information.
6. Materials may be incomplete.
7. The documents may not be authentic or accurate.

This type of research, which is classified as qualitative research, allowed for the members of the association to express their information without the intrusion of a researcher.

### Data Analysis Procedure

Upon receipt, each narrative was outlined and keywords matching the criteria for coding (Appendix C) were underlined and labeled to match the appropriate frame for which they described. Certain key words that were dominant among respondents were:

Structural – reorganizing, redefining policy, establishing procedures, budgeting

Human Resource - staff development, involving staff in decision making,

developing the organization, group participation

Political – collaboration with policy makers, politically involved with state issues,

engages in being fluent in politics and the process

Symbolic – grow the school culture, redefining the school’s vision, establishing a

more defined school culture

All the data from each respondent was coded in one sitting. Completing the analysis in one sitting allowed for the researcher to provide consistency in coding the responses. Once the narratives were initially analyzed thoroughly, the researcher placed the narratives aside for at least a 48-hour period. Once a specific amount of time had passed, the researcher reanalyzed the narratives looking for any indicators that may have not been interpreted on the first analysis. Each labeled component directly related to an area of the coding was noted, and the other information provided was not considered viable information unless it was directly tied to the frames.

After the completion of the two coding sessions, the number of frames and name of frames used were listed on each respondent’s written narrative. The information then was compiled into table format which allowed for a comparison of the information with each frame and the percentage of respondents functioning within specific frames.

The analysis of the qualitative data was conducted in its entirety before any computation of the quantitative data was considered. This procedure was implemented to lower the risk of the researcher having bias in conducting the evaluation of the written narratives. To assist in providing verification for the results of the coding, the researcher reexamined the complete set of responses in multi settings before providing the final conclusions of the research. With the completion of the interpretation of the written qualitative data it then was possible for the researcher to analyze the quantitative data.

### Summary

The methodology used in this study contained both qualitative and quantitative components. The components were used simultaneously to provide a triangulation to determine the influence of the frames approach and how it applied to the superintendents' association. The quantitative analysis was conducted with assistance from a statistical package provided by Dr. Janice Williams Miller of Oklahoma State University and through the use of Microsoft Excel. This chapter addressed data collection, population, the role of the researcher, instrumentation, quantitative components, and qualitative components. Chapter IV provides the data analysis and findings based on the methodologies.

## CHAPTER IV

### DATA ANALYSIS AND FINDINGS

The data collected from the Oklahoma Technology Center Superintendents' Association was analyzed through both qualitative and quantitative measures. The qualitative analysis was conducted first to alleviate any perceived statistical results upon the analysis of the written narratives. The following chapter will explain the analysis of the data collected from the population of the association and the findings of both methodologies.

#### Qualitative Analysis

The qualitative data obtained focused on the written narratives provided by the respondents dealing with a leadership incident they had incurred while members of the Oklahoma Technology Center Superintendents' Association. Each narrative was analyzed independently of each other, with only the respondent's personal coding to indicate the source of the response.

Through using the criteria for coding (Appendix E) provided by Bolman and Deal (1994), the written narratives were evaluated. Through the evaluation the following questions were answered:

1. How many frames do the superintendents use?
2. Which frames do they use?

### Number of Frames Used

Within the written narratives certain patterns emerged from the data. Table 4 expresses the number of frames utilized by the members and the percentage of the respondents per frame is indicated. The functioning of 50% of the respondents falls primarily within one frame. However, the respondents using two and three frames were consistent with 25% for both groups.

TABLE 4  
NUMBER OF FRAMES USED BY THE MEMBERS

Number of frames	Oklahoma Technology Center Superintendents' Association members (n=16)	Percentage Of Respondents Per Frame
1	8	50%
2	4	25%
3	4	25%
4	0	0%

These findings correlate to the predictions of Bolman and Deal (1991) by having leaders rarely using more than two frames and almost no one using four frames. In three samples conducted by Bolman and Deal (1991) leaders who used more than two frames was less than 25%, and the number who used four frames was 1% or less. With the members, there was not a difference in numbers of two and three frames, but no respondent showed evidence of working in all four frames.

Written Narrative Frames Used

Table 5 depicts the frames used by the members that responded to the written narrative. The categories were broken down by frame type: structural, human resource, political, and symbolic. The primary frame interpreted in the narratives was the structural frame followed by human resource, symbolic and political in consecutive order. The number of members represented in the member's column in Table 5 exceeds 16, because some members are operating in more than one frame. The percentage point difference human resource, political, and symbolic frames is less than 20; however, a significant difference of 25 points separates the structural frame from the functioning of the other frames among the membership. The difference substantiates the structural frame as the dominant frame being utilized by the members of the association when they described a self-reported leadership incident.

TABLE 5  
NUMBER OF MEMBERS UTILIZING EACH FRAME

Frames	Oklahoma Technology Center Superintendents' Association members (n=16)	Percentage Of Respondents Utilizing Specific Frame
Structural	11	69%
Human Resource	7	44%
Political	4	25%
Symbolic	5	31%

To provide a more exact picture of the respondents and the frames in which they function, Table 6 lists the frames the members portrayed in the written narrative. The members who exhibited the political frame were less likely to function in multiple frames. Many of the combinations listed by the members included the structural frame as a component of the combination, with only three of the respondents indicating only structural. The highest percentage combination existed between having structural, human resource, and symbolic frame components. These frames have implications for both managerial and leadership characteristics being present in the respondent's abilities.

TABLE 6  
PARTICIPANTS AND SPECIFIC FRAMES BEING UTILIZED

Participant Coding	STRUCTURAL Frame	HUMAN RESOURCE Frame	POLITICAL Frame	SYMBOLIC Frame
A1	X	X		X
D1	X			
F1	X	X		
G1	X	X		X
H1	X			
J1	X	X		X
K1	X	X		
L1			X	
N1	X			
Q1			X	
R1	X			
T1			X	
X1		X		X
Y1			X	
A2	X	X		X
A4	X			

Implications for Written Narrative Findings and  
Relation to Years of Experience

The implications of effectiveness by the frames can be broken down for each category. The effectiveness rating is based on multiple research studies (Harlow 1994, Strickland 1992, and Durocher 1996) conducted using the Bolman and Deal frames.

Structural – indicates higher effectiveness as a manager and lower effectiveness as a leader

Human Resource – indicates substantial effectiveness in both manager and leader roles

Political – indicates substantial effectiveness in both manager and leader roles

Symbolic – indicates higher effectiveness as a leader and lower effectiveness as a manager

With the political frame being the most prominent indicator that an individual is both effective as a manager and a leader (Bolman and Deal, 1991), the association had four members that hold qualities of being both an effective manager and an effective leader. The structural frame, on the other hand, was utilized by most of the other respondents. These findings indicate it is a dominant characteristic possessed by the membership, which provides a strong connotation for a more effective manager.

Research validates these results. Bolman and Deal (1994) indicated that between samples of Florida and Singapore school administrators the structural and human resource frames were the dominant frames used among the participants. As indicated in Table 5, the same frames were the primary ones used by the members of the association.

Some similar themes emerged from the written narratives. Some themes found consistently in the structural frame were: “implementation of strategic plan,” “clarifying district’s goals,” “developing new educational outcomes and administrative objectives,” and “clarifying policies and procedures with staff.”

The human resource frame primarily focused on training of staff and receiving staff input. Some examples included: “collaboration with business and industry,” “encourage everyone’s participation,” “economic development team,” and “variety of team building exercises.”

The political frame primarily focused on the bargaining and negotiating with members of the legislature on behalf of their school and the system. The political frame was unique in the findings as being the only frame that was not used in combination with any other frame for a respondent and was the lowest percentage frame used.

The symbolic frame, on the other hand, was not established as a single frame for a respondent and was the third in the rating of utilization. The symbolic frame had two primary words that were expressed in the written descriptions: culture and values. The representation of the symbolic frame focused on enriching and stabilizing the culture of the organization. The values went hand-in-hand with the culture, because two of the respondents said to help develop the culture it would be necessary to assess current practices and institutional values to revitalize and understand the current culture.

### Demographic Impact

To explore the breakdown of the frames a years of experience perspective on the frames is provided. Through the number of years an individual has been associated with

career and technology education, the information in Table 7 shows the correlation between years in the association and frames used. The list indicates the respondents and the frames they possess and the years they have been a member of the association. The years as a member do not seem to have any pattern or specific indication on the frames that an individual may use, except relating to the political frame. The political frame is primarily exhibited by individuals that have been in the association for 10 years or more with the exception of one respondent that has only been in the association for one year.

TABLE 7  
PARTICIPANT'S YEARS AS MEMBER OF ASSOCIATION AND FRAMES  
INDICATED IN WRITTEN DESCRIPTIONS

Participant Coding	YEARS IN ASSOCIATION	STRUCTURAL Frame	HUMAN RESOURCE Frame	POLITICAL Frame	SYMBOLIC Frame
A1	1	X	X		X
D1	6	X			
F1	1	X	X		
G1	10	X	X		X
H1	16	X			
J1	4	X	X		X
K1	14	X	X		
L1	17			X	
N1	7	X			
Q1	10			X	
R1	5	X			
T1	28			X	
X1	25		X		X
Y1	1			X	
A2	13	X	X		X
A4	14	X			

To expand this analysis, Table 8 indicates the total years an individual has been in the career and technology education system. The one respondent with only one year as a member of the association has been a member of the system for 20 years. With the total years in the system the political frame does prove to have individuals with at least ten years of experience within the system of career and technology education. All the other frames vary among the years as a member of the association and as years in career and technology education.

TABLE 8  
PARTICIPANT'S YEARS IN CAREER AND TECHNOLOGY EDUCATION  
AND FRAMES INDICATED IN WRITTEN DESCRIPTIONS

Participant Coding	YEARS IN CAREER AND TECHNOLOGY EDUCATION	STRUCTURAL Frame	HUMAN RESOURCE Frame	POLITICAL Frame	SYMBOLIC Frame
A1	13	X	X		X
D1	27	X			
F1	30	X	X		
G1	20	X	X		X
H1	16	X			
J1	29	X	X		X
K1	14	X	X		
L1	17			X	
N1	18	X			
Q1	10			X	
R1	5	X			
T1	38			X	
X1	25		X		X
Y1	20			X	
A2	21	X	X		X
A4	14	X			

Another finding that was made from the qualitative data used to establish Table 7 and Table 8 was that the years of experience within the system and association do not have a direct correlation on how many frames an individual used. This would substantiate the idea that the longer an individual is in the system does not increase their ability to work within increased number of frames. The only section that truly exhibited a similar years indication was among the political frame. Those who used this frame had more than 10 years of experience in career and technology education. Both the human resource frame and symbolic frame were not a single frame any one respondent possessed; therefore, with this sample an independent analysis of either frame could not be conducted.

The potential reasoning for the demographics to not have implications for the expansion of frames with more years of experience is that the model in which the system operates. The Oklahoma Department of Career and Technology Education provides a bureaucratic model that disseminates certain guidelines for the technology centers to follow. With this type of structure, the demographics will not have an impact because the push-down of guidelines from the department does not allow for deviation from the norm; therefore, maintaining becomes important to survival.

### Quantitative Analysis

The quantitative data analysis focused on the responses from the Leadership Orientations (Self) survey instrument (Appendix A).

The main questions answered through the quantitative analysis were:

1. How do the members perceive themselves?

2. Do certain frames point to effectiveness?
3. How do demographics relate to the leadership orientations?

### Behavior and Leadership Style Perceptions

The first portion of the survey focused on the behavior styles of the respondents. Table 9 expresses the group mean scores of the 24 respondents from the members of the association.

TABLE 9

#### GROUP BEHAVIOR STYLE MEAN SCORES

Frames	Oklahoma Technology Center Superintendents' Association members Mean Scores (n=24)
Structural	4.07
Human Resource	4.28
Political	3.87
Symbolic	3.91

The mean scores were derived from the raw scores of the survey instrument specific to the behavior styles section of the instrument, questions 1 – 32. Each respondent's mean score consisted of eight raw scores ranging from 1 to 5 indicating rating of self in reference to provided statement. The mean scores of each respondent were then compiled within each frame to provide a group mean score for each frame.

The findings of the quantitative mean scores for the behavioral styles indicate the human resource frame is the primary behavior frame being used by the members of the association. The analysis is based on the statements provided to the respondents with no allowance for respondents to modify the statements.

The leadership styles in Table 10 follow the same pattern as the behavior style mean scores. The mean scores were derived from the raw scores of the survey instrument specific to the leadership styles section of the instrument, questions 1 – 5. Each respondent's mean score consisted of five raw scores ranging from 1 to 4 indicating rating of self in reference to the provided statement. The mean scores of each respondent were then compiled within each frame to provide a group mean score for each frame. The leadership styles did not have as many respondents because of the incorrect numbering on the surveys by the respondents. The data that was inappropriately answered was disregarded from the totals so it would not skew the results.

TABLE 10  
GROUP LEADERSHIP STYLE MEAN SCORES

Frames	Oklahoma Technology Center Superintendents' Association members Leadership Styles Mean Scores (n=20)
Structural	2.47
Human Resource	3.34
Political	2.01
Symbolic	2.37

The findings specified in Table 9 and 10 indicate a larger gap exists between the leadership styles means than the behavior means. To provide a more significant depiction of the comparison, a bar graph in Figure 1 provides a comparison of the two styles group mean scores.

It is important to remember the behavior mean scores are based on a 1 to 5 scale, where the leadership styles is depicted on a 1 to 4 scale; therefore, the means will automatically be lower in the leadership styles, but the pattern of the means was pertinent in the data collection. Even with this variation, the mean comparisons indicated the same ranking of the frames from most used to least used: human resource, structural, symbolic and political.

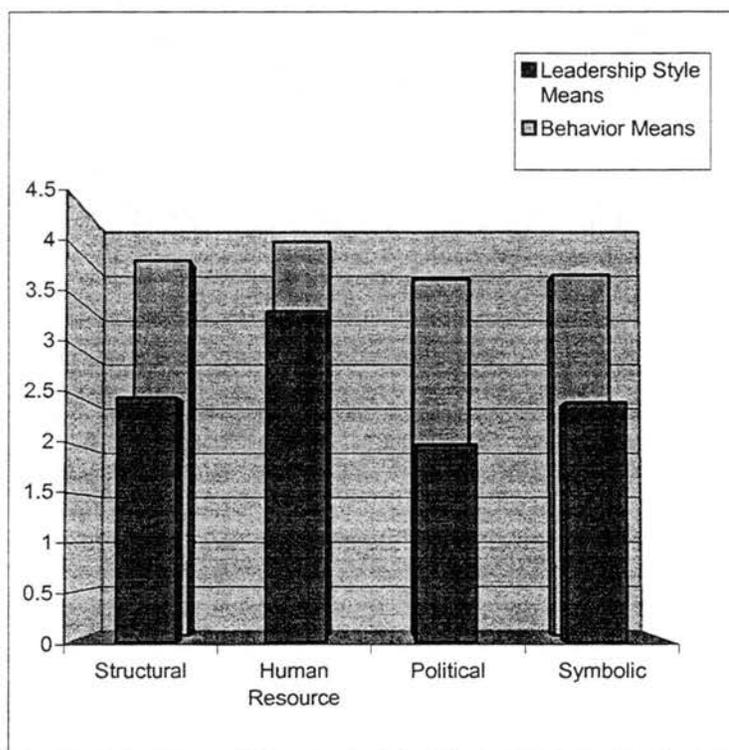


Figure 1. Mean Comparisons

### Variance of Study

As indicated in the Chapter III, the Within-Subjects ANOVA was conducted on both the behavior and leadership styles means of the respondents to provide further analysis. Both of the analyses showed significant F results and therefore indicated that the differences among the group averages exceeded chance expectations, allowing for a conclusion that the group variances are significantly different (Keppel, 1991). The variances for the behavior style means were: 0.28, structural; 0.10 human resource; 0.20 political; and 0.16 symbolic. The variances for the leadership styles means were: 0.32, structural; 0.36, human resource; 0.31, political; and 0.52, symbolic. The variance between the frames indicates that the respondents function at different levels as it refers to Bolman and Deal frames.

### Demographic Impact on the Behavior and Leadership Styles

The demographics of the group as a whole are indicated in Table 11. The years of experience range from 1 year to 38 years of experience in some form of educational institution. To help confine a more specific analysis of the mean scores the respondents were divided into two groups: 1 to 9 years as superintendent and 10 plus years as superintendent. This group division was chosen to provide an even distribution of members per group.

TABLE 11

## DEMOGRAPHIC INFORMATION PERTAINING TO YEARS OF SERVICE

Respondent	Total Years in Current job	Total Years as a Technology Center Superintendent	Total Years in Career and Technology Education	Total Years in Common Education
A1	1	1	13	2
B1	10	10	31	9
C1	6	6	27	13
D1	6	6	15	14
E1	-	-	-	-
F1	1	1	30	0
G1	10	10	20	0
H1	16	16	16	17
I1	18	18	32	8
J1	4	4	29	0
K1	14	14	14	15
L1	17	17	17	9
M1	4	4	20	0
N1	7	7	18	10
O1	6	6	20	17
P1	-	-	-	-
Q1	10	10	10	22
R1	5	5	5	39
S1	-	-	-	-
T1	28	28	38	6
U1	2	2	6	6
V1	4	4	25	0
W1	-	-	-	-
X1	25	22	25	0
Y1	1	1	20	15
Z1	16	16	16	24
A2	13	13	21	0
A3	-	-	-	-
A4	14	14	14	17

The comparison of total years in career and technology education with common education experience did not provide an even distribution of members or adequate data to complete a comparison. Therefore, the main focus for the demographics was based on the years of experience dealing with career and technology education. The years for current job and years as superintendent were equal when divided into the two age categories; therefore, they will be considered as one.

In terms of difference between mean scores, Table 12 compares the mean scores for the years of experience among the behavior style frames. In Table 13 the same year group comparison is completed with the leadership style mean scores.

The difference in mean scores, as exhibited in Tables 12 and 13, are greater for the behavioral mean scores than the leadership mean scores, with the exception of the symbolic frame. The symbolic frame for both styles shows little to no difference between the groups.

TABLE 12

## YEARS AS SUPERINTENDENT COMPARED TO BEHAVIOR MEANS

Years as Superintendent in an Oklahoma Technology Center	Structural Mean	Human Resource Mean	Political Mean	Symbolic Mean
1-9 (n=12)	3.960	4.380	3.780	3.91
10+ (n=12)	4.090	4.180	3.960	3.91
Difference Between Means	-0.135	0.198	-0.174	0.00

TABLE 13

## YEARS AS SUPERINTENDENT COMPARED TO LEADERSHIP STYLE MEANS

Years as Superintendent in an Oklahoma Technology Center	Structural Mean	Human Resource Mean	Political Mean	Symbolic Mean
1-9 (n=10)	2.44	3.36	1.86	2.36
10+ (n=10)	2.50	3.32	2.16	2.38
Difference Between Means	-0.06	0.04	-0.30	-0.02

The other indications from both tables are that the superintendents from both year categories have the primary frame of human resource. The secondary frame is the same between both groups and is the structural frame. However, the 1 to 9 group has the symbolic frame higher than the political frame, and the 10 plus category placed the political frame before the symbolic frame. In both year groups the primary leadership style is the human resource frame as was for the behavioral style. However, the other three frames follow the same pattern in the leadership styles unlike the behavior means. The order follows structural, symbolic, and political for their leadership styles.

Once again, the demographics show small differences among the groups. The reasoning expressed previously in the qualitative analysis remains true for the quantitative analysis. The bureaucratic structure of the system does not allow for significant deviation from the prescribed expectations.

#### Effectiveness of Members Relating to the Frames

The differing frames in both scenarios are the political frame and the symbolic frame. However, Bolman and Deal (1994) indicate these frames have similar predictors.

The symbolic frame is consistently the worst predictor of effectiveness as a manager, but is the best predictor of effectiveness as a leader. The political frame follows the same type of connotation that their colleagues and superiors perceive individuals that operate within this frame as better managers and leaders. So both of the frames have a positive relation to being a leader; however, symbolic does not provide support for effectiveness as a manager. The consistency of the human resource and structural pattern indicates that the members have characteristics that are positively related to effectiveness as managers with a secondary strength of being effective leaders.

Table 14 illustrates the interpretation of the respondents of their effectiveness as a manager and as a leader. The scoring is rated on a 1 to 5 scale. The indication from the mean scores of their effectiveness illustrates that the members rated themselves as more effective as managers than as leaders. However, the difference of the means is only 9%, which is a small percentage of difference between the two variables.

It is important to recognize the ratings of effectiveness are self-reported. The self-reported effectiveness of the members may not be the actual effectiveness rating perceived by the individuals within their organization. Individuals functioning in the structural frame, for example, may consider themselves very effective if they make policies and follow clear guidelines. The organization, on the other hand, may see the policies and no flexibility as stifling to their work. The same can be true for individuals functioning in the human resource and symbolic. They may see themselves empowering people and sustaining the culture, but this is not what the organization sees as being effective. The one frame that may provide a more realistic analysis of effectiveness is the

political frame, because the individuals operate in negotiation situations and may have a better understanding of the organizations outlook.

TABLE 14  
DEMOGRAPHIC INFORMATION PERTAINING TO  
EVALUATION AS A MANAGER AND LEADER

Respondent	Manager	Leader
A1	5	5
B1	5	5
C1	5	4
D1	5	5
E1	-	-
F1	4	4
G1	5	5
H1	4	4
I1	5	5
J1	4	4
K1	4	4
L1	4	4
M1	5	5
N1	5	5
O1	5	5
P1	-	-
Q1	3	3
R1	5	5
S1	-	-
T1	5	5
U1	5	5
V1	4	4
W1	-	-
X1	5	5
Y1	4	4
Z1	5	4
A2	5	5
A3	-	-
A4	5	5
Average	4.63	4.54

Another component of the quantitative data used to determine effectiveness as a manager and leader regards the demographic information relating to gender of the respondents. The gender analysis is an area that most researchers predict will follow the stereotypical roles of men and women. This would mean that the women would rate themselves lower in most categories than males would. Women would be considered less effective in both categories of management and leadership, but effectiveness as a manager would be more prevalent than a leader. In Bolman and Deal's (1991) study, out of the four samples surveyed, only one had enough of a gender difference to provide an effective analysis. The findings indicated that the women were actually rated higher than men in most categories. The support for this research aspect cannot be analyzed with this study, because the population of the association was less than 14% female. Therefore, the gender comparisons do not have enough data to provide an adequate comparison.

#### Perception of Word Description

To turn back to the group as a whole, question number six among the leadership styles on the survey instrument had the respondents rank order the words that best describe them as an individual. The reason for pulling out this specific question was to help further the understanding of the superintendents' frame perceptions. The choices for the descriptors were: analyst, humanist, politician, and visionary. The descriptors follow the frames sequentially starting with structural, human resource, political, and ending with symbolic.

Out of the 20 respondents the results to this point are consistent with the human resource frame being a primary frame and the other frames do not show the same primary

consistency with previous compiled values. Figure 2 shows a pie chart that indicates the respondents preferred classification by ranking of one-word descriptors to be the symbolic frame. The leadership styles section when determined by ranking of one word was not consistent with the human resource frame. The frame that moved to the top of the list was the symbolic frame; however, the human resource frame was only one percentage point from being the primary frame. The other interesting point is that the political frame seemed to be more preferred than the structural frame, which the structural frame has consistently been the second preferred frame when the mean scores of the group were compiled on multiple aspects and not just one word. The significance of this particular example is that the perceptions of the members can be altered by one word, and if the superintendents were judged solely by this one descriptor the results may be inconsistent with their actual work.

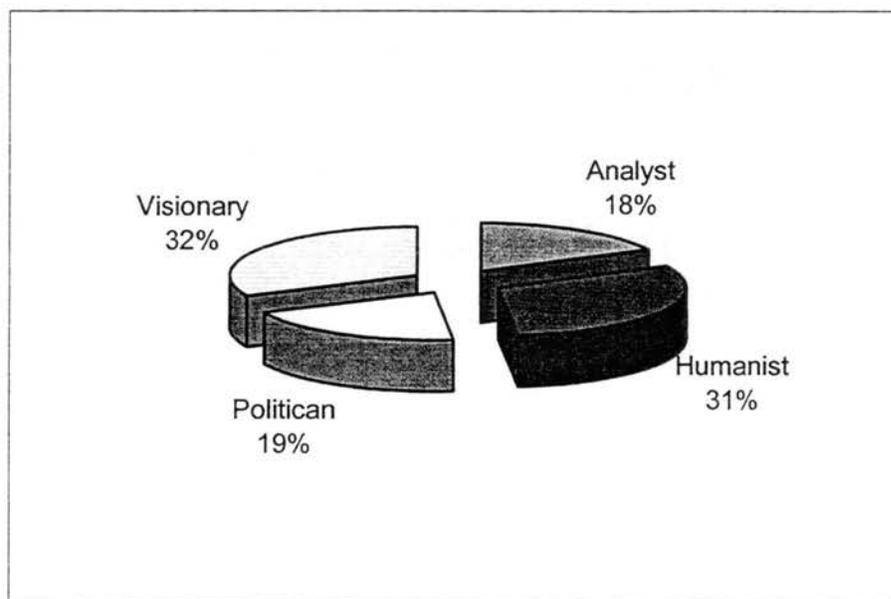


Figure 2. Descriptors of Respondent

### Triangulation of Quantitative and Qualitative Data

In Table 15, a one to one comparison of the written narratives, behavioral styles, and leadership styles are shown. Out of the 14 members with all data categories, only 2 respondents, A1 and F1, show consistency through all three categories. Eleven of the respondents (A1 D1, F1, G1, H1, J1, K1, T1, X1, Y1, A2) all indicate that their primary frame in either behavioral or leadership styles matches the characteristics expressed in their written narratives. The three respondents, L1, N1, and A4, did not have a primary frame illustrated within their written narratives; however, evidence of the second and third frames were present. There are only three (T1, X1, Y1) comparisons that have their behavioral styles and leadership styles on different ends of the spectrum.

This data allows for a triangulation of the quantitative and qualitative data. The comparison helps to verify the respondents written narratives with the components of the survey. The main findings indicate only 14% of the respondents have consistency among their leadership and behavioral styles and only 7% have consistency among all three categories.

TABLE 15  
ONE TO ONE COMPARISON OF WRITTEN NARRATIVE, BEHAVIORAL  
STYLES, AND LEADERSHIP STYLES

Participant Coding	Categories	STRUCTURAL Frame	HUMAN RESOURCE Frame	POLITICAL Frame	SYMBOLIC Frame
A1	Written Narrative Behavior Style	X	X		X
	Leadership Style	2 <sup>nd</sup>	1 <sup>st</sup>	4 <sup>th</sup>	3 <sup>rd</sup>
D1	Written Narrative Behavior Style	X			
	Leadership Style	1 <sup>st</sup>	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>
F1	Written Narrative Behavior Style	X	X		
	Leadership Style	2 <sup>nd</sup>	1 <sup>st</sup>	4 <sup>th</sup>	3 <sup>rd</sup>
G1	Written Narrative Behavior Style	X	X		X
	Leadership Style	4 <sup>th</sup>	1 <sup>st</sup>	3 <sup>rd</sup>	2 <sup>nd</sup>
H1	Written Narrative Behavior Style	X			
	Leadership Style	3 <sup>rd</sup>	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>
J1	Written Narrative Behavior Style	X	X		X
	Leadership Style	4 <sup>th</sup>	1 <sup>st</sup>	3 <sup>rd</sup>	2 <sup>nd</sup>
K1	Written Narrative Behavior Style	X	X		
	Leadership Style	2 <sup>nd</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	1 <sup>st</sup>
	Written Narrative Behavior Style	X	X		X
	Leadership Style	3 <sup>rd</sup>	2 <sup>nd</sup>	4 <sup>th</sup>	1 <sup>st</sup>
	Written Narrative Behavior Style	X	X		X
	Leadership Style	3 <sup>rd</sup>	1 <sup>st</sup>	4 <sup>th</sup>	2 <sup>nd</sup>
	Written Narrative Behavior Style	X	X		X
	Leadership Style	2 <sup>nd</sup>	1 <sup>st</sup>	3 <sup>rd</sup>	2 <sup>nd</sup>

TABLE 15 (Continued)

Participant Coding	Categories	STRUCTURAL Frame	HUMAN RESOURCE Frame	POLITICAL Frame	SYMBOLIC Frame
L1	Written Narrative Behavior Style	1 <sup>st</sup>	2 <sup>nd</sup>	X 2 <sup>nd</sup>	3 <sup>rd</sup>
	Leadership Style	2 <sup>nd</sup>	1 <sup>st</sup>	3 <sup>rd</sup>	4 <sup>th</sup>
N1	Written Narrative Behavior Style	X 3 <sup>rd</sup>	1 <sup>st</sup>	3 <sup>rd</sup>	2 <sup>nd</sup>
	Leadership Style	2 <sup>nd</sup>	1 <sup>st</sup>	3 <sup>rd</sup>	4 <sup>th</sup>
T1	Written Narrative Behavior Style	4 <sup>th</sup>	2 <sup>nd</sup>	X 1 <sup>st</sup>	3 <sup>rd</sup>
	Leadership Style	2 <sup>nd</sup>	1 <sup>st</sup>	4 <sup>th</sup>	3 <sup>rd</sup>
X1	Written Narrative Behavior Style	1 <sup>st</sup>	X 2 <sup>nd</sup>	1 <sup>st</sup>	X 3 <sup>rd</sup>
	Leadership Style	4 <sup>th</sup>	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>
Y1	Written Narrative Behavior Style	2 <sup>nd</sup>	1 <sup>st</sup>	X 3 <sup>rd</sup>	4 <sup>th</sup>
	Leadership Style	3 <sup>rd</sup>	4 <sup>th</sup>	1 <sup>st</sup>	2 <sup>nd</sup>
A2	Written Narrative Behavior Style	X 3 <sup>rd</sup>	X 2 <sup>nd</sup>	2 <sup>nd</sup>	X 1 <sup>st</sup>
	Leadership Style	3 <sup>rd</sup>	1 <sup>st</sup>	3 <sup>rd</sup>	2 <sup>nd</sup>
A4	Written Narrative Behavior Style	X 3 <sup>rd</sup>	1 <sup>st</sup>	3 <sup>rd</sup>	2 <sup>nd</sup>
	Leadership Style	2 <sup>nd</sup>	1 <sup>st</sup>	4 <sup>th</sup>	3 <sup>rd</sup>

## Summary

With the chosen frames outlined for each group, the human resource frame is the frame most utilized by the superintendents. The indications made by the human resource frame is that the membership can be both effective as a manager and as a leader. Through the analyses of Bolman and Deal (1991), they found that both the human resource and political frames are positively related to effectiveness as both a manager and a leader in every sample. However, the political frame was ranked third and fourth by the respondents. The results of the qualitative data and quantitative data provide triangulation for this study by validating the finding within each methodology.

The qualitative data answered the two proposed questions:

1. How many frames do leaders use?
2. Which frames do they use?

The number of frames indicated by the results shows that 50% of the members use primarily one frame in their role as a superintendent. The other 50% were divided between two and three frames. The results indicate that no member of the association that completed the written narrative operated in all four frames in their leadership incident. These results are consistent with qualitative research conducted by Bolman and Deal (1991, 1994) and quantitative research conducted by Harlow (1994), Strickland (1992), and Durocher (1996).

The questions addressed by the quantitative data were:

1. How do the members perceive themselves?
2. Do certain frames point to effectiveness?
3. How do demographics relate to the leadership orientations?

The members perceived themselves as functioning in the human resource frame through both behavioral and leadership styles. However, when given a single word descriptor the members perceived themselves being more in the symbolic frame than human resource frame by choosing visionary over humanist. The difference between the two groups was only 1%.

Through their perception of primarily functioning in the human resource frame indicates their effectiveness can be both as a manager and a leader. The secondary frame, structural, in all quantitative instances relates to effectiveness as a manager so there is a definite correlation to being effective as a manager in the first two frames of the respondents. The mean scores from their perceived effectiveness indicated by the members placed effectiveness as a manager above their effectiveness as a leader which supports the structure of their primary and secondary frame preferences.

The primary and secondary frame preferences remained the same through multiple demographic analyses. The human resource frame and structural frame were consistent across the demographics. The political and symbolic frames, on the other hand, varied depending on experience. The more experienced members placed the characteristics of the political frame higher than the symbolic frame. The members with nine or fewer years portrayed that symbolic characteristics were higher than the political frame characteristics. Both the symbolic and political frame offer positive interpretation for effective leaders; however, the symbolic frame is the worst indicator of being an effective manager. The political frame can be a good indicator for effectiveness as a manager as well as the effectiveness as a leader. These frame areas were the only consistent difference between the two areas of experience. The lack of significance

among the demographic areas ties back to the structure of the overall system. The system is a bureaucracy, which has definite guidelines and procedures that must be met by the technology centers. These guidelines do not allow for varying structure of the system; therefore, years of experience do not have an impact on the use of the frames.

Both the quantitative data and the qualitative data support the two primary frames. The members' characteristics exhibited tendencies from the human resource frame and the structural frame. The qualitative data did place more emphasis on the structural; however, the sample for the qualitative data was smaller than the quantitative sample, which may have led to the difference. The specifics of both frames provide a higher connotation for effectiveness as a manager, but effectiveness as a leader can be found consistently in individuals functioning in the human resource frame. Therefore, the members' characteristics have dominant predictors for both effective leadership and management in the primary and secondary frames in which they operate.

## CHAPTER V

### SUMMARY, RECOMMENDATIONS, IMPLICATIONS, AND CONCLUSIONS

Oklahoma Technology Centers are a vital component of Career and Technology education in Oklahoma. The technology centers offer secondary, adult, business, and industries an opportunity to obtain new skills, strengthen existing skills, and enhance economic development within the state. Through the leadership of the Technology Center Superintendents' Association all of these opportunities continue to grow. This chapter includes a summary, recommendations, implications, conclusions, and commentary derived from the data compiled in this study as it relates to the expansion of the information base on the members of the Oklahoma Technology Center Superintendents' Association.

#### Summary of the Study

This study was conducted using the membership of the Oklahoma Technology Center Superintendents' Association (the association) during the fall of 2001. The membership of the association consisted of the superintendents of the 29 technology centers in Oklahoma. The purpose of the association is to provide a forum for the individual schools to work together on issues affecting the system as a whole (Major, 1999).

## Purpose

The utilization of the frames theory (Bolman & Deal, 1984, 1991, 1994) provided the basis for this study. The purpose of this study was to examine the frames, by which the members of the Oklahoma Technology Center Superintendents' Association operate.

The following objectives were met:

1. Outline the four potential frames for which the members may operate and describe the prominence of each frame;
2. Analyze these frames among the group through the utilization of a survey instrument and a written narrative which correlate to the frames of Bolman and Deal (1984, 1991, 1994);
3. Report the realities of frame utilization that were revealed;
4. Speculate about the impact of the prominent frames and the future of potential superintendents;
5. Assess the usefulness of this evaluation for continued research in building a database of information for perspective members of the Superintendents' Association.

To accomplish these objectives both qualitative and quantitative data were obtained from the members of the association.

## Data Needs and Sources

Because the primary focus of the study was to identify and describe the Bolman and Deal frames that existed among the members of the association, the primary data pertained to the number of frames used by the members and which frames were

predominant in their behavioral and leadership styles. The population for this study was all 29 members of the association.

### Data Collection

Data collection for this study consisted of qualitative and quantitative measures. The qualitative data was based on a brief written leadership incident narrative provided by the respondents. The quantitative collection of data was based on a survey instrument, Leadership Orientations, (Self). This instrument consisted of five categories: behavioral style; leadership style; word descriptor; effectiveness as a manager and effectiveness as a leader; and demographics pertaining to years of experience and gender. Before either component of data was collected each respondent was presented a consent form to participate in the study.

Once the data from both methodologies were collected, the analysis of the written narratives was conducted. The researcher's analysis of these data was completed first to lower the risk of any biases obtained by computing the statistical information prior to interpreting the written information. After completion of the written narratives, the data was tabulated for each respondent as they related to the behavioral and leadership styles of the survey instrument. The comparisons between the styles were outlined and further data was provided on the demographic components. To strengthen the triangulation of the study, the quantitative and qualitative data were compared to further the results of the study. Once the comparisons were complete, the effectiveness as a manager and the effectiveness as a leader were measured. The last component to be analyzed was the rank ordering of the one-word descriptors the respondents perceived to best describe them.

### Data Organization and Interpretation

Data collected from the written narratives and the survey instruments were coded for anonymity. The written leadership incidents were interpreted according to Bolman and Deal's (1994) criteria for coding frame responses. Once all of the incidents were interpreted a tabulation of the number of frames per respondent were recorded in a table. The other component of the interpretation exhibited the specific frames used by each respondent.

The data collected from the survey instrument were placed in a table to allow for computation of mean scores and frequency distribution of responses. The table was broken down into sections: behavioral styles; leadership styles; word descriptor; gender; years in current job; years as superintendent; years in career and technology education; years in common education; effectiveness as a manager; and effectiveness as a leader.

The mean scores for each respondent were summarized for the behavioral and leadership styles. The mean scores were utilized in the comparisons and ANOVAs. To assist in better understanding the comparison of mean scores as it applied to the demographics, the years as a superintendent provided the basis for the comparison. The years were broken into two categories: 1 to 9 years and 10 plus years. This division allowed for an equal distribution of mean scores for both the behavioral and leadership styles. The other years of service provided by the demographic information and gender information did not provide equal distribution on respondents to allow for a comparison. A one to one comparison of the written narratives, behavioral styles, and leadership styles was then conducted to help verify the consistency of the respondents.

After the interpretation of the frames from the group as a whole and then broken down into the two, year categories, a comparison was made to the respondents' perceptions of their effectiveness as a manager and as a leader. To conclude, the analysis of the data collected from the survey instrument, the rank order word descriptor was analyzed to indicate the respondents' perception of their role.

### Data Analysis

Data from both methodologies were inductively analyzed for content and frame information relevant to the significance of the study. Attempts were made to eliminate personal bias that might exist due to my own familiarity with members of the association. The direction of data analysis was consistent with the objectives set in Chapter I. The findings of the study are substantiated by literature reviewed in Chapter II and based on data revealed by the respondents.

### Summary of Findings

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

1. The usefulness of the frames of Bolman and Deal (1984, 1991, 1994) in identifying the leadership characteristics of the members of the superintendents' association;
2. Speculate about the impact of the prominent frames for current and future superintendents;

3. Assess the usefulness of this evaluation for continued research in building a database of information for perspective members of the superintendents' association.
4. Identify areas for further research.

### Usefulness of the Frames Analysis

Bolman and Deal several years ago distilled theories of organization into four categories or traditions, which were labeled frames (1994). The four frames used within the association-- structural, human resource, political, and symbolic--were found to be useful in establishing the constructs of leadership (Appendix D, Bolman and Deal, 1984, 1990, 1991, 1994). Using this structure of analysis provided an overall perspective of the members without being confined to one theoretical model of leadership.

It was assumed that the members would operate within at least one of the frame approaches, based on previous research stating that most leaders will function at least in one frame (Bolman and Deal, 1991, 1994). With a small sample of only 29 members of the association, the assumption of multiple members functioning within more than one frame was decreased. However, the analysis established, even with a small sample size, that the findings were consistent with Bolman and Deal's (1992) outline that the majority of individuals function in one frame and less than 1% function in all four frames. No member of the association operated in all of the frames in the analysis. The most frames used by 25% of the members were three. Fifty percent of the members used one frame predominantly when describing their written narrative of a leadership incident. This

analysis provided a better understanding of the functionality of the association and each member.

The purpose of the study focused on obtaining relevant information for current and potential superintendents to use in their understanding of the functionality of being a superintendent in a technology center. The usefulness of the frame approach allowed for a more complex analysis of characteristics of the association and what implications those characteristics may have for the future of the association. Without the limitations of choosing one specific leadership orientation, the usefulness of the frame analysis strengthens the understanding of abilities and does not limit the outcomes.

This tool was successful in identifying the frames predominantly used by the members of the association. Both from the behavioral and leadership perspectives, consistency among the members helped to substantiate the findings for each section.

#### Impact of Frames Theory Analysis

The data revealed that the members of the association had primary and secondary frames that were consistent in each comparison: human resource frame and structural frame. The human resource frame focuses on the interaction between individuals and organizational needs (Bolman and Deal, 1994). With the association members having this frame as a primary frame, it implies that the association has value for relationships and works toward facilitation and empowerment. Individuals exhibiting the components of the human resource frame have positive indicators of being both an effective manager and an effective leader.

The structural frame emphasizes rationality, efficiency, structure, and policies (Bolman and Deal, 1994). This frame emphasizes that there is a sense of structure within the association. Individuals exhibiting the components of this frame have tendencies to use policies and rules to fix problems and set clear directions to reach specific outcomes. The individuals functioning within the structural frame bring components to the membership with positive indications as being effective managers. However, the structure and bottom line mentality of the individuals functioning in the structural frame provide little indication of being an effective leader, but instead exhibit strong managerial skills.

The addition of the demographic information did not affect the outcomes of the primary and secondary frames; however, the remainder of the frames did have some variation. The percentage of variation was minimal; however, it was consistent in each year analysis. The main variation was between the symbolic and political frame. The impact of this variation is that the members with more than 10 years of experience function in the political frame more than members with fewer than 10 years. The association could consider these characteristics when dealing with legislative and political issues that affect the system.

The impact of the written narratives is that the member, in actual situations tended to be more structural. This would indicate a stronger emphasis toward holding people accountable for results and analysis of data within the organization is a critical value point. Even with this variation from the survey instrument data, the secondary frame indicated by the written narratives was the human resource frame. Having the human resource frame as the secondary frame emphasizes that the individuals of the association

allow for the relationship concept to weigh on decisions made within the organization.

These characteristics will impact the functionality of the association.

#### Future Indicators for the Association

The findings in this study revealed multiple implications for the future of the Oklahoma Technology Center Superintendents' Association. Even though the results do not indicate responses from 100% of the population, the return rate of 83% for the survey instrument respondents and 55% for the written narrative respondents provide a sound basis for analyzing the association's future.

In establishing a more relevant information base, it is important for current and potential superintendents to understand that through these findings the human resource components of being a superintendent are important. Characteristics of being able to build relationships and valuing the individual and organizational needs of one's institution are important in functioning as a superintendent of an Oklahoma technology center.

While focusing on the relationships, it is also important not to lose sight of the structure and clear directions that have been set forth by the association. Being accountable and being able to analyze the bottom line are important components in the characteristics of the current association membership; therefore, this lends pertinent information to those aspiring to be a technology center superintendent.

The information from the frames and effectiveness charts indicate that being effective as a manager and a leader are current components of being a superintendent of a technology center. The perception of the members is that they are effective as both

managers and leaders. To maintain the structure of the current association, future members must be able to understand the importance of being both a manager and leader within the scope of being a technology center superintendent. However, what is being done now within the association may not be effective for the future. The current biases built into the association may prove to become controlling and self-containing, which may damage the future of the system. Therefore, this perception of effectiveness may apply to the current membership, but there could be danger in applying the same perception to the future.

For future consideration, members may want to analyze the number of frames in which they are operating and find areas for development. Operating in all frames is not a highly common phenomenon; however, being able to understand the benefits and drawbacks from each frame is important for each member and the association as a whole to function now and in the future. For example, if the whole association collectively concentrates on being structural in nature, the human aspect and symbolism of the organizations will lose their significance throughout the state. It is important to understand the complete scope of the frames represented by the association's membership and use them to benefit development of individual members, the association and the career and technology system.

#### Areas for Further Study

It is recommended that further association research be conducted as follows. A study could be conducted using personal interviews to build upon the written narratives of leadership incidents provided by the superintendents. The interviews would allow the

researcher to probe for more information to help understand the specifics of the incident that may have been left out in the written version.

Second, a study of other state associations could provide relevance to the impact of the frames within the organizations as it is viewed nationally. This could provide information relating to the success of a state's career and technology education.

Third, a longitudinal study of this association would allow for a trend among superintendents to be compared. This could also help to potentially pinpoint certain characteristics of the association that provided successful indicators for the system as a whole.

Fourth, a study of common education superintendents and technology center superintendents could provide a perspective on the differing educational environments as the role of superintendent is analyzed with the Bolman and Deal frames. This perspective would allow for a comparative analysis of the two educational entities to be performed.

Lastly, a study looking at how the association has been dealing with the movement to dismantle the system could be conducted. This study could provide information on the forces working with and working against the system. It also could potentially illustrate the rise and fall of the Oklahoma Career and Technology Education system.

### Implications and Recommendations

The implications and recommendations of this study will be described through the theory, research, and practice components of research.

## Theory

Bolman and Deal's (1984, 1991, 1994) frame theory has shown to be useful in describing and identifying the frames for which the members of the Oklahoma Technology Center Superintendents' Association operate. The theoretical base for the frames theory clarified leadership characteristics for superintendents with a more realistic approach to situations in educational settings. The theory can be used as a guide for further research (Durocher 1996, Strickland 1992, Harlow 1994), to expand upon the frames influencing the association members: structural, human resource, political, and symbolic.

## Research

Research of the leadership characteristics of the Oklahoma Technology Center Superintendents' Association has focused on the model of frames developed by Bolman and Deal. The model of frames adds to the knowledge base of describing the characteristics of a technology center superintendent. The great strength of the model is its ability to bring together many concepts that are isolated in other theories to provide a comprehensive analysis. With the diversity of the superintendents within the association, this model provides an avenue to view consistency and differences among the group. This consistency and differences they have as a group can be a strong foundation for future development of the association or future restructuring of the association. It can also lend to other areas of research to help substantiate and enrich their findings.

## Practice

Through the data obtained from the members of the association, it is evident that the association values relationships and the development of their organization. The information gleaned by this study can be utilized in evaluating members' peers in the association. The same information can provide potential members of the association with an understanding of the operations of the group and the perceptions of the members. In the practice of the members working together, the results can provide a base of understanding between members to better explain the tendencies of leadership they possess and how it may affect the workings of the association.

## Commentary

When I began this study, I was searching for an objective way to provide information to aspiring technology center superintendents. The lack of information pertaining to the realistic characteristics of the superintendent's role seems critical to understand in order for the association and system to successfully maintain its premier status. Through relevant data collection, experience within the system, and extended review of literature, I feel my objective was met.

Prior to determining the specific approach for the study, it became evident that it would be difficult to find one theory that would be applicable to the group as a whole. I was not interested in ranking the superintendents individually on leadership skills (good or bad), but a more comprehensive overview of the complete association was desired.

Through the Bolman and Deal (1984, 1991, 1994) frames approach, I felt it would accomplish a broader definition of characteristics for the association. After the analysis,

the frames approach did prove to give the overall perspective I was hoping for in the analysis. The overall perspective gives a fundamental understanding of the characteristics of the current association. If an individual were considering becoming a superintendent, he or she, may be able to better understand his or her role within the system through this data analysis.

The association will face many changes and challenges throughout the future; however, with the ability to identify the members' characteristics it could potentially aid in continuing the vision of the system and ensure a future for Oklahoma Technology Centers.

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APPENDIXES

APPENDIX A  
SURVEY INSTRUMENT

## CONSENT FORM

### General Information

You have been asked by Oklahoma State University graduate student Marcie R. Mack to participate in a study about your experiences and preferences regarding your role as an Oklahoma technology center superintendent.

The investigator, in the preparation of research report to be submitted for scholarly publication, will use the information collected in the survey and written description of a leadership incident as sources of data. The completion of the data collection instruments should last approximately forty-five minutes. The investigator will utilize a statistically sound questionnaire and proven analysis of the written descriptions. All subjects will be asked the same general questions. The investigator will tabulate all questionnaires and written descriptions for analysis. The questionnaires and written descriptions will be treated as confidential materials and will be kept under locked confines.

No questionnaire or written description will be conducted or accepted by the investigator before the subject and investigator have signed this consent form, with a copy provided for the subject. All data will be kept no longer than one year from the date of collection, or the amount of time it takes to complete the research project, whichever is shorter. The projected date for destroying data is May 31, 2002.

### Subject Understanding

I understand that participation in the questionnaire and written description of a leadership incident 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 understand that the questionnaire and written description will be conducted according to commonly accepted research procedures and that information taken from the instruments will be recorded in such a manner that subjects cannot be identified directly or through identifiers linked to the subject.

I understand that the instruments will **not** cover topics that could reasonably place the subject at risk of criminal or civil liability or be damaging to the subject's financial standing or employability or deal with sensitive aspects of the subject's own behavior such as illegal conduct, drug use, or sexual behavior.

I may contact Marcie R. Mack at telephone number (580) 242-2750 or (580) 855-2666 in case of any problems. I may also contact IRB Executive Secretary Sharon Bacher, University Research Services, 203 Whitehurst, Oklahoma State University, Stillwater, OK 74078; (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

---

Person authorized to sign for subject, if required

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

Signed:

---

Project Director

## Survey Instrument

Coding of Participant: \_\_\_\_\_

## LEADERSHIP ORIENTATIONS (SELF)

© 1990, Lee G. Bolman and Terrence E. Deal, all rights reserved

This questionnaire asks you to describe your leadership and management style.

**I. Behaviors**

You are asked to indicate *how often* each of the items below is true of you.

Please use the following scale in answering each item.

1	2	3	4	5
Never		Sometimes		Always
	Occasionally		Often	

So, you would answer '1' for an item that is never true of you, '2' for one that is occasionally true, '3' for one that is sometimes true of you, and so on.

**Be discriminating!** Your results will be more helpful if you think about each item and distinguish the things that you really do all the time from the things that you do seldom or never.

1. \_\_\_\_\_ *Think very clearly and logically.*
2. \_\_\_\_\_ *Show high levels of support and concern for others.*
3. \_\_\_\_\_ *Have exceptional ability to mobilize people and resources to get things done.*
4. \_\_\_\_\_ *Inspire others to do their best.*
5. \_\_\_\_\_ *Strongly emphasize careful planning and clear time lines.*

6. \_\_\_\_\_ *Build trust through open and collaborative relationships.*
7. \_\_\_\_\_ *Am a very skillful and shrewd negotiator.*
8. \_\_\_\_\_ *Am highly charismatic.*
9. \_\_\_\_\_ *Approach problems through logical analysis and careful thinking.*
10. \_\_\_\_\_ *Show high sensitivity and concern for others' needs and feelings.*
11. \_\_\_\_\_ *Am unusually persuasive and influential.*
12. \_\_\_\_\_ *Am able to be an inspiration to others.*
13. \_\_\_\_\_ *Develop and implement clear, logical policies and procedures.*
14. \_\_\_\_\_ *Foster high levels of participation and involvement in decisions.*
15. \_\_\_\_\_ *Anticipate and deal adroitly with organizational conflict.*
16. \_\_\_\_\_ *Am highly imaginative and creative.*
17. \_\_\_\_\_ *Approach problems with facts and logic.*
18. \_\_\_\_\_ *Am consistently helpful and responsive to others.*
19. \_\_\_\_\_ *Am very effective in getting support from people with influence and power.*
20. \_\_\_\_\_ *Communicate a strong and challenging sense of vision and mission.*
21. \_\_\_\_\_ *Set specific, measurable goals and hold people accountable for results.*
22. \_\_\_\_\_ *Listen well and am unusually receptive to other people's ideas and input.*
23. \_\_\_\_\_ *Am politically very sensitive and skillful.*
24. \_\_\_\_\_ *See beyond current realities to generate exciting new opportunities.*
25. \_\_\_\_\_ *Have extraordinary attention to detail.*
26. \_\_\_\_\_ *Give personal recognition for work well done.*
27. \_\_\_\_\_ *Develop alliances to build a strong base of support.*
28. \_\_\_\_\_ *Generate loyalty and enthusiasm.*

29. \_\_\_\_\_ *Strongly believe in clear structure and a chain of command.*
30. \_\_\_\_\_ *Am a highly participative manager.*
31. \_\_\_\_\_ *Succeed in the face of conflict and opposition.*
32. \_\_\_\_\_ *Serve as an influential model of organizational aspirations and values.*

## II. Leadership Style

This section asks you to describe your leadership style. For each item, give the number "4" to the phrase that best describes you, "3" to the item that is next best, and on down to "1" for the item that is least like you.

1. My strongest skills are:

- \_\_\_\_\_ a. *Analytic skills*
- \_\_\_\_\_ b. *Interpersonal skills*
- \_\_\_\_\_ c. *Political skills*
- \_\_\_\_\_ d. *Ability to excite and motivate*

2. The best way to describe me is:

- \_\_\_\_\_ a. *Technical expert*
- \_\_\_\_\_ b. *Good listener*
- \_\_\_\_\_ c. *Skilled negotiator*
- \_\_\_\_\_ d. *Inspirational leader*

3. What has helped me the most to be successful is my ability to:

- \_\_\_\_\_ a. *Make good decisions*
- \_\_\_\_\_ b. *Coach and develop people*
- \_\_\_\_\_ c. *Build strong alliances and a power base*
- \_\_\_\_\_ d. *Energize and inspire others*

4. What people are most likely to notice about me is my:

- \_\_\_\_\_ a. *Attention to detail*
- \_\_\_\_\_ b. *Concern for people*
- \_\_\_\_\_ c. *Ability to succeed, in the face of conflict and opposition*
- \_\_\_\_\_ d. *Charisma.*

5. My most important leadership trait is:

- \_\_\_\_\_ a. *Clear, logical thinking*
- \_\_\_\_\_ b. *Caring and support for others*
- \_\_\_\_\_ c. *Toughness and aggressiveness*
- \_\_\_\_\_ d. *Imagination and creativity*

6. I am best described as:

- \_\_\_\_\_ a. *An analyst*
- \_\_\_\_\_ b. *A humanist*
- \_\_\_\_\_ c. *A politician*
- \_\_\_\_\_ d. *A visionary*

### III. Overall rating

Compared to other individuals that you have known with comparable levels of experience and responsibility, how would you rate yourself on:

1. Overall effectiveness as a **manager**.

1	2	3	4	5
Bottom 20%		Middle 20%		Top 20%

2. Overall effectiveness as a **leader**.

1	2	3	4	5
Bottom 20%		Middle 20%		Top 20%

### IV. Background Information

1. Are you: \_\_\_\_\_ Male \_\_\_\_\_ Female

2. How many years have you been in your current job? \_\_\_\_\_

3. How many total years of experience do you have as an Oklahoma technology center superintendent? \_\_\_\_\_

4. How many total years of experience do you have in the Oklahoma Career and Technology Education system? \_\_\_\_\_

5. How many total years of experience do you have in an Oklahoma common school? \_\_\_\_\_

APPENDIX B

WRITTEN LEADERSHIP INCIDENT INSTRUMENT

### Written Description of Leadership Incident

Coding of Participant: \_\_\_\_\_

In the space provided below please describe a leadership incident that you have experienced while being a member of the Oklahoma Technology Center Superintendents' Association.

APPENDIX C

LETTER ACCOMPANYING THE INSTRUMENTS

MARCIE MACK

Rt. 2 Box 194 Carrier, OK 73727 (home)

1201 W. Willow Enid, OK 73703 (work)

[mmack@autrytech.com](mailto:mmack@autrytech.com) or [marcmack@enid.com](mailto:marcmack@enid.com)

---

DATE

SUPERINTENDENT'S NAME

INSTITUTION'S NAME

ADDRESS

CITY, STATE ZIP

Dear Superintendent,

I would like to thank you for taking the time to complete the enclosed survey and written narrative describing a leadership incident you have had while being a member of the superintendents' association. I am completing research on the leadership orientations utilized by members of the Oklahoma Technology Center Superintendents' Association as they relate to the research of Lee Bolman and Terrance Deal.

Enclosed along with the survey and written narrative is a consent form which explains the research being completed and how the information will be utilized. The consent form must be received with the completed instruments to allow for me to utilize the information.

Please return the signed consent form along with the survey and the written narrative. If you have any questions or concerns please feel free to contact me by phone at 580-242-2750 (day)/580-855-2666(evening) or email at [mmack@autrytech.com](mailto:mmack@autrytech.com).

Thank you once again for your participation, your input is invaluable to completing my research. Please do not hesitate to contact me with any questions.

Sincerely,

Marcie Mack

Enclosures

APPENDIX D  
RESEARCHERS USED OR INFLUENCED  
BY BOLMAN AND DEAL

Below is the work that Bolman and Deal currently aware of that includes use of the four-frame model.

One stream of research using concepts from the frames is represented in a body of work from Dick Heimovics, Bob Herman, and colleagues. They developed frame measures through content-analysis of critical incidents provided by respondents:

Heimovics, R. D., Herman, R. D., and Jurkiewicz, C. L. "The Political Dimension of Effective Nonprofit Executive Leadership," 1995, Vol.5, No.3, Spring 1995, *Nonprofit Management and Leadership: A Quarterly Journal*, 233-248. The article was voted the 1996 winner of the Peter F. Drucker Prize for the Best Scholarly Paper in Nonprofit Management and Leadership.

Heimovics, R. D., Herman, R. D., and Jurkiewicz Coughlin, C. L. "Executive Leadership and Resource Dependence in Nonprofit Organizations: a Frame Analysis. *Public Administration Review*, 1993, 53(5), 419-427.

The three studies below used frames concepts to look at educational leaders:

Bensimon, E. M. "The Meaning of 'Good Presidential Leadership': a Frame Analysis." *The Review of Higher Education*, 1989, 12, 107-123.

Bensimon, E. M. "Viewing the Presidency: Perceptual Congruence Between Presidents and Leaders on their Campuses." *The Leadership Quarterly*, 1990, 1, 71-90.

Wimpelberg, R. K. "Managerial Images and School Effectiveness." *Administrators' Notebook*, 1987, 32, 1-4.

Another strand is work that Terry Deal and Lee Bolman have done using an instrument that they developed to measure leadership orientations:

Bolman, L. G. and Deal, T. E. "Leading and Managing: Effects of Context, Culture and Gender." *Education Administration Quarterly*, 1992, 28, 314-329.

Bolman, L. G. and Deal, T. E. "Reframing Leadership: the Effects of Leaders' Images of Leadership." In Clark, K. E., Clark, M. B, and Campbell, D. (Eds.). *Impact of Leadership*. Greensboro, North Carolina: Center for Creative Leadership, 1992.

Bolman, L. G. and Deal, T. E. "Leadership and Management Effectiveness: a Multi-Frame, Multi-Sector Analysis." *Human Resource Management*, 1991, 30, 509-534. (This is actually the most recent paper -- the publication date is misleading.)

The following paper also uses the Leadership Orientations Instrument (click on the title to see a copy of the paper):

Bolman, L. G., and Granell, E. "Versatile Leadership: a Comparative Analysis of Reframing in Venezuelan Managers." Paper Presented at the World Congress, Ibero-American Academy of Management, Madrid, 1999.

Books or works that use frameworks similar to the four frames include:

Bergquist, W. H. *The Four Cultures of the Academy*. (Bergquist describes four cultures: collegial, managerial, developmental, and negotiating.)

Birnbaum, R. *How Colleges Work*. San Francisco: Jossey-Bass: 1988. (Birnbaum uses four images that parallel the frames: collegial, bureaucratic, political, and anarchical.)

The largest body of frames-influenced work is in doctoral dissertations. The list includes:

Cadwell, Karin. "Redesigning Delivery of Care: A Four-Frame Analysis of Patient-Centered Innovations in Six U.S. Hospitals." Union Institute Graduate Program, 1994.

Durocher, E. A. *Leadership orientations of school administrators: a survey of nationally recognized school leaders*. Dissertation Abstracts International, 57(02), 525A

Harlow, J. H. *Educational Leadership: A frame analysis*. Dissertation Abstracts International, 55(08), 2227A.

Miron, Dorina. "A Pilot Study to Assess the Relevance of Bolman and Deal's Framing Theory to the Management of Stress in Newsrooms." University of Missouri, 1994. Dissertation Abstracts International, 55(05), 1158A.

Mathis, Saralyn Grenga, (1999) "The Relationship of Leadership Frame Use of Departmental Chairs to Faculty Job Satisfaction as Perceived by Selected Departmental Faculty Members, Dissertation Abstracts International Section A: Humanities and Social Sciences VOL 60(6-A) 1999 1936.

Scott, David Kent . *An exploratory study of leadership and organizational climate/culture of NCAA and NAIA Finalists for the 1995-1996 Sears Directors' Cup (Athletic Directors)*. University of Northern Colorado, 1997. Dissertation Abstracts International. Volume: 58-08, Section: A, page: 3063.

Strickland, J. S. *Leadership perspectives of Tennessee school leaders*. East Tennessee State University, 1992. Dissertation Abstracts International, 53(04), 1018a.

APPENDIX E  
WRITTEN LEADERSHIP INCIDENT CODING CRITERIA

## WRITTEN INCIDENT CRITERIA

Frame	Frame-related issues	Frame-related actions
Structural	Coordination, and control; clarity or lack of clarity about goals, roles or expectations; references to planning, budgeting, and evaluation; discussion of analysis or its absence; issues around policies and procedures	Reorganizing, implementing, or clarifying policies and procedures; developing new information, budgeting, or control systems, adding new structural units, planning processes
Human Resource	Discussions of individuals' feelings, needs preferences, or abilities; references to the importance of participation, listening, open communications, involvement in decision making, morale; discussion of interpersonal relationships; emphasis on collaboration, win-win, and a sense of family or community	Processes of participation and involvement, training, recruiting new staff, workshops and retreats, empowerment, organization development, and quality-of-work-life programs
Political	Focus on conflict or tension among different constituencies, interest groups, or organizations; competing interests and agendas; disputes over allocation of scarce resources; games of power and self-interest	Bargaining, negotiation, advocacy, building alliances, and networking with other key players
Symbolic	Discussions of institutional identity, culture, or symbols; discussions of the image that will be projected to different audiences; discussion of the symbolic importance of existing practices, rituals, or artifacts; emphasis on influencing how different audiences will interpret or frame an activity or decision	Creating or revitalizing ceremonies, and rituals; working to develop or restate the institution's vision; working on influencing organizational culture, using self as a symbol

(Bolman and Deal, 1994, p. 49)

APPENDIX F

RELIABILITY OF THE SURVEY INSTRUMENT

## Reliability of Leadership Orientations Scales:

Reliability statistics for Leadership Orientations (Based on 1309 colleague ratings for a multisector sample of managers in business and education).

### Structural Frame (Section I)

DATA BELOW ARE BASED ON 1309 COMPLETE CASES FOR 8 DATA ITEMS.

TEST SCORE STATISTICS

TOTAL TOTAL/ 8 ODD EVEN

MEAN 32.493 4.062 16.412 16.081

STD DEV 5.703 0.713 2.917 2.974

STD ERR 0.158 0.020 0.081 0.082

MAXIMUM 40.000 5.000 20.000 20.000

MINIMUM 8.000 1.000 4.000 4.000

N CASES 1309 1309 1309 1309

INTERNAL CONSISTENCY DATA

SPLIT\_HALF CORRELATION .875

SPEARMAN\_BROWN COEFFICIENT .933

GUTTMAN (RULON) COEFFICIENT .933

COEFFICIENT ALPHA \_ ALL ITEMS .920

COEFFICIENT ALPHA \_ ODD ITEMS .856

COEFFICIENT ALPHA \_ EVEN ITEMS .834

ITEM RELIABILITY STATISTICS

ITEM\_EXCLUDING

STANDARD TOTAL RELIABILITY THIS ITEM

ITEM LABEL MEAN DEVIATION R INDEX R ALPHA

1 ITEM1THI 4.204 0.761 .773 .589 .710 .911

2 ITEM9LOG 4.120 0.867 .829 .719 .771 .906

3 ITEM17FA 4.159 0.843 .852 .718 .802 .904

4 ITEM25AT 3.872 0.964 .781 .753 .700 .912

5 ITEM5CAR 4.061 0.924 .823 .761 .759 .907

6 ITEM13CL 4.008 0.903 .845 .763 .789 .904

7 ITEM21SP 3.988 0.949 .795 .755 .720 .910

8 ITEM29CL 4.081 0.902 .716 .646 .625 .918

### Human resource Frame (Section I)

DATA BELOW ARE BASED ON 1331 COMPLETE CASES FOR 8 DATA ITEMS.

TEST SCORE STATISTICS

TOTAL TOTAL/ 8 ODD EVEN

MEAN 32.458 4.057 16.334 16.124  
 STD DEV 6.303 0.788 3.267 3.256  
 STD ERR 0.173 0.022 0.090 0.089  
 MAXIMUM 40.000 5.000 20.000 20.000  
 MINIMUM 8.000 1.000 4.000 4.000  
 N CASES 1331 1331 1331 1331  
 INTERNAL CONSISTENCY DATA  
 SPLIT\_HALF CORRELATION .867  
 SPEARMAN\_BROWN COEFFICIENT .929  
 GUTTMAN (RULON) COEFFICIENT .929  
 COEFFICIENT ALPHA \_ ALL ITEMS .931  
 COEFFICIENT ALPHA \_ ODD ITEMS .902  
 COEFFICIENT ALPHA \_ EVEN ITEMS .843  
 ITEM RELIABILITY STATISTICS  
 ITEM\_EXCLUDING  
 STANDARD TOTAL RELIABILITY THIS ITEM  
 ITEM LABEL MEAN DEVIATION R INDEX R ALPHA  
 1 ITEM2HIG 4.226 0.866 .853 .738 .807 .919  
 2 ITEM10HI 4.064 1.005 .864 .867 .813 .918  
 3 ITEM18HE 4.116 0.908 .870 .791 .827 .918  
 4 ITEM26GI 4.077 1.011 .758 .767 .676 .929  
 5 ITEM6BUI 3.925 1.002 .844 .846 .788 .920  
 6 ITEM14HI 3.936 0.959 .780 .748 .708 .926  
 7 ITEM22LI 4.067 0.935 .838 .783 .784 .921  
 8 ITEM30HI 4.046 0.974 .783 .763 .710 .926

### **Political frame (Section I)**

DATA BELOW ARE BASED ON 1268 COMPLETE CASES FOR 8 DATA ITEMS.

TEST SCORE STATISTICS  
 TOTAL TOTAL/ 8 ODD EVEN  
 MEAN 31.391 3.924 15.875 15.517  
 STD DEV 5.739 0.717 2.961 3.027  
 STD ERR 0.161 0.020 0.083 0.085  
 MAXIMUM 40.000 5.000 20.000 20.000  
 MINIMUM 8.000 1.000 4.000 4.000  
 N CASES 1268 1268 1268 1268

## INTERNAL CONSISTENCY DATA

SPLIT\_HALF CORRELATION .837

SPEARMAN\_BROWN COEFFICIENT .911

GUTTMAN (RULON) COEFFICIENT .911

COEFFICIENT ALPHA \_ ALL ITEMS .913

COEFFICIENT ALPHA \_ ODD ITEMS .839

COEFFICIENT ALPHA \_ EVEN ITEMS .842

## ITEM RELIABILITY STATISTICS

## ITEM\_ EXCLUDING

## STANDARD TOTAL RELIABILITY THIS ITEM

## ITEM LABEL MEAN DEVIATION R INDEX R ALPHA

1 ITEM3MOB 4.039 0.889 .794 .705 .725 .901

2 ITEM11PE 3.812 0.922 .793 .732 .721 .901

3 ITEM19GE 4.006 0.883 .798 .705 .730 .900

4 ITEM27DE 3.956 0.927 .786 .729 .711 .902

5 ITEM7SKI 3.909 0.915 .779 .712 .702 .903

6 ITEM15AD 3.731 0.964 .789 .761 .711 .902

7 ITEM23PO 3.922 0.920 .775 .713 .697 .903

8 ITEM31SU 4.018 0.859 .795 .683 .728 .901

**Symbolic frame (Section I)**

DATA BELOW ARE BASED ON 1315 COMPLETE CASES FOR 8 DATA ITEMS.

## TEST SCORE STATISTICS

TOTAL TOTAL/ 8 ODD EVEN

MEAN 31.382 3.923 15.923 15.459

STD DEV 6.325 0.791 3.137 3.384

STD ERR 0.174 0.022 0.087 0.093

MAXIMUM 40.000 5.000 20.000 20.000

MINIMUM 8.000 1.000 4.000 4.000

N CASES 1315 1315 1315 1315

## INTERNAL CONSISTENCY DATA

SPLIT\_HALF CORRELATION .882

SPEARMAN\_BROWN COEFFICIENT .937

GUTTMAN (RULON) COEFFICIENT .936

COEFFICIENT ALPHA \_ ALL ITEMS .931

COEFFICIENT ALPHA \_ ODD ITEMS .846

COEFFICIENT ALPHA \_ EVEN ITEMS .887

## ITEM RELIABILITY STATISTICS

ITEM\_ EXCLUDING

STANDARD TOTAL RELIABILITY THIS ITEM

ITEM LABEL MEAN DEVIATION R INDEX R ALPHA

1 ITEM4INS 4.064 0.906 .830 .751 .776 .920

2 ITEM12IN 3.805 0.995 .872 .868 .825 .916

3 ITEM20VI 4.084 0.931 .805 .750 .743 .923

4 ITEM28GE 3.935 1.000 .846 .846 .790 .919

5 ITEM8CHA 3.806 1.027 .760 .780 .677 .928

6 ITEM16HI 3.769 0.937 .798 .749 .734 .923

7 ITEM24SE 3.968 0.925 .815 .754 .755 .922

8 ITEM32MO 3.951 0.983 .842 .827 .786 .919

**Structural Frame (Section II forced-choice)**

DATA BELOW ARE BASED ON 1229 COMPLETE CASES FOR 6 DATA ITEMS.

TEST SCORE STATISTICS

TOTAL TOTAL/ 6 ODD EVEN

MEAN 15.773 2.629 8.543 7.230

STD DEV 4.955 0.826 2.570 2.893

STD ERR 0.141 0.024 0.073 0.083

MAXIMUM 24.000 4.000 12.000 12.000

MINIMUM 6.000 1.000 3.000 3.000

N CASES 1229 1229 1229 1229

INTERNAL CONSISTENCY DATA

SPLIT\_HALF CORRELATION .644

SPEARMAN\_BROWN COEFFICIENT .783

GUTTMAN (RULON) COEFFICIENT .780

COEFFICIENT ALPHA \_ ALL ITEMS .841

COEFFICIENT ALPHA \_ ODD ITEMS .743

COEFFICIENT ALPHA \_ EVEN ITEMS .782

ITEM RELIABILITY STATISTICS

ITEM\_ EXCLUDING

STANDARD TOTAL RELIABILITY THIS ITEM

ITEM LABEL MEAN DEVIATION R INDEX R ALPHA

1 I1ANALY 2.716 1.134 .819 .929 .718 .795

2 I2TECHN 2.271 1.212 .729 .884 .578 .825

3 I3MAKEG 2.854 1.040 .666 .692 .521 .833

4 II4ATTEN 2.340 1.168 .751 .877 .616 .816  
 5 II5CLEAR 2.972 0.984 .690 .678 .561 .826  
 6 II6ANALY 2.619 1.084 .825 .894 .731 .793

### **Human resource frame (Section II forced-choice)**

DATA BELOW ARE BASED ON 1233 COMPLETE CASES FOR 6 DATA ITEMS.

#### TEST SCORE STATISTICS

TOTAL TOTAL/ 6 ODD EVEN  
 MEAN 16.369 2.728 8.018 8.351  
 STD DEV 4.852 0.809 2.412 2.765  
 STD ERR 0.138 0.023 0.069 0.079  
 MAXIMUM 24.000 4.000 12.000 12.000  
 MINIMUM 6.000 1.000 3.000 3.000  
 N CASES 1233 1233 1233 1233

#### INTERNAL CONSISTENCY DATA

SPLIT\_HALF CORRELATION .755  
 SPEARMAN\_BROWN COEFFICIENT .861  
 GUTTMAN (RULON) COEFFICIENT .856  
 COEFFICIENT ALPHA \_ ALL ITEMS .843  
 COEFFICIENT ALPHA \_ ODD ITEMS .626  
 COEFFICIENT ALPHA \_ EVEN ITEMS .792

#### ITEM RELIABILITY STATISTICS

ITEM\_ EXCLUDING  
 STANDARD TOTAL RELIABILITY THIS ITEM  
 ITEM LABEL MEAN DEVIATION R INDEX R ALPHA  
 1 II1INTER 2.721 1.075 .785 .844 .673 .808  
 2 II2GOODL 2.682 1.065 .728 .775 .595 .823  
 3 II3COACH 2.450 1.030 .467 .481 .277 .878  
 4 II4CONCE 2.828 1.069 .829 .887 .737 .795  
 5 II5CARIN 2.847 1.083 .842 .912 .754 .791  
 6 II6HUMAN 2.841 1.154 .826 .953 .722 .797

### **Political frame (Section II forced-choice)**

DATA BELOW ARE BASED ON 1218 COMPLETE CASES FOR 6 DATA ITEMS.

#### TEST SCORE STATISTICS

TOTAL TOTAL/ 6 ODD EVEN  
 MEAN 14.300 2.383 6.720 7.580  
 STD DEV 4.720 0.787 2.747 2.358

STD ERR 0.135 0.023 0.079 0.068  
 MAXIMUM 24.000 4.000 12.000 13.000  
 MINIMUM 6.000 1.000 3.000 3.000  
 N CASES 1218 1218 1218 1218  
 INTERNAL CONSISTENCY DATA  
 SPLIT\_HALF CORRELATION .708  
 SPEARMAN\_BROWN COEFFICIENT .829  
 GUTTMAN (RULON) COEFFICIENT .824  
 COEFFICIENT ALPHA \_ ALL ITEMS .799  
 COEFFICIENT ALPHA \_ ODD ITEMS .680  
 COEFFICIENT ALPHA \_ EVEN ITEMS .602  
 ITEM RELIABILITY STATISTICS  
 ITEM\_EXCLUDING  
 STANDARD TOTAL RELIABILITY THIS ITEM  
 ITEM LABEL MEAN DEVIATION R INDEX R ALPHA  
 1 II1POLIT 2.264 1.148 .800 .919 .681 .736  
 2 II2SKILL 2.656 1.004 .670 .673 .525 .774  
 3 II3BUILD 2.432 1.214 .681 .826 .501 .781  
 4 II4ABILI 2.730 1.010 .559 .565 .385 .802  
 5 II5TOUGH 2.025 1.155 .714 .825 .557 .767  
 6 II6POLIT 2.194 1.140 .800 .912 .681 .736

### **Symbolic frame (Section II forced-choice)**

DATA BELOW ARE BASED ON 1221 COMPLETE CASES FOR 6 DATA ITEMS.

TEST SCORE STATISTICS  
 TOTAL TOTAL/ 6 ODD EVEN  
 MEAN 14.400 2.400 9.663 7.135  
 STD DEV 5.413 0.773 3.147 2.517  
 STD ERR 0.155 0.022 0.090 0.072  
 MAXIMUM 24.000 4.000 16.000 12.000  
 MINIMUM 6.000 1.000 4.000 3.000  
 N CASES 1221 1221 1221 1221  
 INTERNAL CONSISTENCY DATA  
 SPLIT\_HALF CORRELATION .825  
 SPEARMAN\_BROWN COEFFICIENT .904  
 GUTTMAN (RULON) COEFFICIENT .892  
 COEFFICIENT ALPHA \_ ALL ITEMS .842

COEFFICIENT ALPHA \_ ODD ITEMS .701  
COEFFICIENT ALPHA \_ EVEN ITEMS .682  
ITEM RELIABILITY STATISTICS  
ITEM\_ EXCLUDING  
STANDARD TOTAL RELIABILITY THIS ITEM  
ITEM LABEL MEAN DEVIATION R INDEX R ALPHA  
1 I1ABILI 2.410 1.054 .736 .776 .624 .816  
2 I2INSPI 2.514 1.132 .841 .952 .760 .793  
3 I3ENERG 2.375 1.116 .789 .880 .688 .806  
4 I4CHARI 2.241 1.118 .605 .677 .447 .843  
5 I5IMAGI 2.246 0.963 .566 .545 .426 .844  
6 I6VISIO 2.498 1.027 .615 .631 .475 .838

Bolman L. [http://bsbpa.umkc.edu/classes/bolman//new\\_page\\_1.htm](http://bsbpa.umkc.edu/classes/bolman//new_page_1.htm)

APPENDIX G  
MEAN SCORES

Respondent	Behavior Styles				Respondents	Leadership Styles			
	Structural	Human Resource	Political	Symbolic		Structural	Human Resource	Political	Symbolic
A1	4	4.25	3.5	3.625	A1	3.2	3.8	1.4	1.6
F1	2.375	4.5	3.29	4.125	F1	1.2	3.8	1.8	3.4
J1	4	4	3.75	4.25	J1	2.2	2.8	1.2	3.8
M1	4.25	4.375	4.25	4.25	M1	2.4	3.8	2	1.8
R1	4.625	4.75	4.5	4.75	U1	2.2	3.6	1.6	2.6
U1	4	4.25	3.375	3.75	V1	3	3.8	1.4	1.8
V1	3.875	4.125	3.25	3.375	Y1	2	1.4	3.4	3.2
Y1	4.25	4.375	3.5	3.25	R1				
C1	3.625	4.625	4.5	4.125	B1				
D1	3.875	3.875	3.375	3.25	C1	2.6	3.8	1.8	1.8
O1	4.5	4.625	4	3.75	D1	3	3.4	1.6	2
N1	4.125	4.75	4.125	4.375	O1				
	3.958333	4.375	3.784583	3.90625	N1	2.6	3.4	2.4	1.6
					Q1				
Q1	3.25	3.375	3.5	3.125	10 plus years	2.44	3.36	1.86	2.36
H1	4.375	4.375	3.625	3.875	G1	1.8	2.6	2.4	3.2
K1	4.25	4.5	3.5	4.375	H1	3	3	2.2	1.8
Z1	3.875	4.375	3.5	3.75	Z1	3	3.6	1.8	1.6
A2	3.875	4	4	4.25	K1	3.4	4	2.8	3.4
A4	3.75	4	3.75	3.875	A2	1.6	3.6	1.6	3.2
B1	4	4	4	3.875	A4	2.6	3.6	1.6	2.2
G1	3.875	4.125	4	3.875	I1	2.4	3.4	2.4	1.8
I1	4.625	4.5	4.125	3.75	T1	2.6	3.4	1.8	2.2
L1	4.625	4.125	4.125	3.875	L1	2.6	2.8	2.4	2.2
T1	3.875	4.125	4.625	4	X1	2	3.2	2.6	2.2
X1	4.75	4.625	4.75	4.25					
	4.09375	4.177083	3.958333	3.90625		2.50	3.32	2.16	2.38

APPENDIX H  
FREQUENCY DISTRIBUTIONS

Grouped Frequency Distribution for Behavioral Styles					
Frame	1	2	3	4	5
Structural	0	10	25	105	52
Human Resource	0	3	9	110	70
Political	0	5	45	112	30
Symbolic	4	5	47	94	42

Grouped Frequency Distribution for Leadership Styles				
Frame	1	2	3	4
Structural	29	19	30	22
Human Resource	5	11	30	54
Political	35	37	22	6
Symbolic	27	32	18	23

APPENDIX I  
INSTITUTIONAL REVIEW BOARD

Oklahoma State University  
Institutional Review Board

Protocol Expires: 8/27/02

Date: Tuesday, August 28, 2001

IRB Application No EO0212

Proposal Title: A FRAME THEORY ANALYSIS OF OKLAHOMA TECHNOLOGY CENTER  
SUPERINTENDENTS' LEADERSHIP CONSTRUCTS

Principal  
Investigator(s):

Marcelle Mack  
RR 2 Box 194  
Carrier, OK 73703

Deke Johnson  
310 Willard  
Stillwater, OK 74078

Reviewed and  
Processed as: Exempt

Approval Status Recommended by Reviewer(s): Approved

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Dear PI :

Your IRB application referenced above has been approved for one calendar year. Please make note of the expiration date indicated above. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be submitted with the appropriate signatures for IRB approval.
2. Submit a request for continuation if the study extends beyond the approval period of one calendar year. This continuation must receive IRB review and approval before the research can continue.
3. Report any adverse events to the IRB Chair promptly. Adverse events are those which are unanticipated and impact the subjects during the course of this research; and
4. Notify the IRB office in writing when your research project is complete.

Please note that approved projects are subject to monitoring by the IRB. If you have questions about the IRB procedures or need any assistance from the Board, please contact Sharon Bacher, the Executive Secretary to the IRB, in 203 Whitehurst (phone: 405-744-5700, sbacher@okstate.edu).

Sincerely,

  
Carol Olson, Chair  
Institutional Review Board

VITA

Marcelle Renee Hague Mack

Candidate for the Degree of

Doctor of Education

Thesis: A FRAME THEORY ANALYSIS OF OKLAHOMA TECHNOLOGY  
CENTER SUPERINTENDENTS' LEADERSHIP CONSTRUCTS

Major Field: Educational Administration

Biographical:

Education: Graduated from Fort Gibson High School, Fort Gibson, Oklahoma in May 1990; received Bachelor of Science degree in Secondary Business Education from Oklahoma State University, Stillwater, Oklahoma, in December 1993; received Master of Science degree in Telecommunications Management from Oklahoma State University, Stillwater, Oklahoma, in May 1998; estimate completing the requirements for the Doctor of Education degree in Educational Administration from Oklahoma State University, Stillwater, Oklahoma, in December 2001.

Experience: Employed at Autry Technology Center, Enid, Oklahoma, from January 1994 to present. Current position is Director of Technology. Previous positions include: Information Systems Manager and Business and Computer Technology Instructor.

Professional Memberships: American Association of Career and Technology Education; Association for Supervision and Curriculum Development; Oklahoma Career and Technology Education; Oklahoma Council of Local Administrators; Phi Delta Kappa International.