UNIVERSITY OF OKLAHOMA

GRADUATE COLLEGE

THE FUNCTION OF CONTEXT, INFLUENCE AND INTUITION IN SOLVING PROBLEMS OF LEADERSHIP

A DISSERTATION

SUBMITTED TO THE GRADUATE FACULTY

in partial fulfillment of the requirements for the

degree of

Doctor of Philosophy

By

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Norman, Oklahoma

2006

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IN SOLVING PROBLEMS OF LEADERSHIP

A DISSERTATION APPROVED FOR THE
GRADUATE COLLEGE

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Abstract

The purpose of the study was to determine if training novice leaders to identify context, influence and intuition embedded in a real life problem-solving narrative as affecting the explicitness they used in describing how they would solve a problem of practice. It was hypothesized that novice leaders who received training would provide more explicit explanations of how they would solve a problem of practice. Research suggests that learning how to identify context, influence, and intuition cues in narratives of leadership practice may enable pre-service leaders to increase the explicitness of their explanation of the process they use to solve problems of practice. Skills, cognitive, and psychodynamic theories of leadership development are used as the theoretical basis for the research. Educators working for the Department of Defense Dependent Schools (DoDDS) were randomly assigned to groups that received a pre-test scenario, post-test scenario, training to identify context, influence and intuition or a combination of all three. No significant differences were found between the four groups. The differences between the group that received only training and the post-test scenario and the other groups were in the direction suggested by cognitive and psychodynamic leadership theory. Although not statistically significant the observation that the description of the solution for the treatment group not receiving the pre-test was more detailed than the solution description for the treatment group that received both the pre-test and the post-test suggests the pre-test may have had a dampening effect on the post-test solution.

Conclusions about the impact of minimal training on explanation explicitness and the dampening effect of the pre-test scenario are discussed within the framework of Howard Gardner's concept of the "unschooled mind" (1991). Recommendations are made for replicating the study with public sector educators and the use of the procedures as a way of providing pre-service leaders problem-solving experience.

CHAPTER I

INTRODUCTION AND BACKGROUND OF THE STUDY

The purpose of the study is to determine whether or not providing the opportunity for pre-service leaders to identify and reflect on context, influence and intuition statements embedded in narratives of leadership practice will have an effect on the way novice leaders think about and explain how they would solve a leadership problem.

Presently there is focus on educational leadership training programs in the United States and Great Britain (Levine, 2005 and Orr, 2003). This focus has resulted in increased attention and consideration regarding the quality of existing preparation programs. The following nine questions of concern have been identified (Levine, 2005):

- Is the purpose of the program focused on the needs of leaders, schools, students and learning?
- Is the curriculum offered by the program consistent with the purpose and goals of the program?
- Does the curriculum offer a balance between theory and practice that prepares pre-service leaders for the day-to-day demands of education leadership?
- Does the composition of the faculty provide representation of academics, and practitioners (expert school leaders, researchers and professors)?
- Are rigorous admission standards in place that ensure students will be motivated and capable of facing the demands of the curriculum?

- Are the graduation requirements strict and the academic degrees appropriate for the profession?
- Is the research carried out within the program driven by practice and useful to leaders and policy developers?
- Are the resources in place adequate to support the program?
- Does the program practice continual self-assessment and improvement practices?

The primary purpose of this study related to the question: Does the curriculum offer a balance between theory and practice that prepares pre-service leaders for the day-to-day demands of educational leadership? Novice leaders experience frustration and feel inadequate in meeting the needs and demands of solving day-to-day problems of practice (Danzig, 1997). Levine (2005) and Orr (2003) have identified bridging the gap between theory and practice as one of the major problems of school administrator preparation programs. In earlier work, Hallinger, Leithwood and Murphy (1993) provided evidence that instruction on the procedures or behavior of leadership did not result in an adequate preparation of students for the day-to-day demands of leadership. They concluded that in order for training to be effective it needed to focus on the thinking processes of expert leaders, or habits of mind (Costa, 2000) that guide leadership behavior.

Quong and Walker (1999) have identified three variables, context, influence, and intuition, about which expert leaders think while solving problems of practice. Studies have been conducted (Danzig, 1997; Schon, 1983) that have focused on using narrative as a method for helping students prepare to become administrators. This

method required them to reflect on narratives of problem situations and solutions as a way of challenging their own biases regarding leadership. While studies (Hallinger, Leithwood, and Murphy, 1993; Quong and Walker, 1999) have identified context, influence and intuition as important considerations in the problem-solving process, no studies were found by this author requiring participants to focus on the context, influence and intuition embedded in narratives of practice as a way of facilitating the development of problem-solving expertise.

This study was designed to investigate the effect of instructing novice leaders to reflect on context, influence and intuition statements contained in narratives of practice on the explicitness of the description they use to describe how they would solve a problem of practice. The intent of this investigation was to provide direction for the training of students preparing to be administrators by providing them insight into the habits of mind (Costa 2000) of expert leaders, thereby bridging the gap between the theory and practice of leadership (Levine 2005; Orr 2003). This approach is based on cognitive theories of leadership developed by Hallinger, Leithwood and Murphy (1993), Gardner (1995) and Kempton (1997), which suggest that the psychodynamic mechanism of reflection can be used to change how novice leaders think about and solve problems of practice, thus aiding in the development of habits of mind associated with expert problem solving.

Leadership Approaches in Education

Introduction

Leadership is generally viewed as a process whereby an individual influences a group of individuals to achieve a common goal (Northouse, 2004). There are several approaches to the study and application of leadership theory: leader versus follower, descriptive versus prescriptive, universal versus contingency, trait versus process, assigned versus emergent, and behavioral versus cognitive (Yukl, 2002). Four general styles of leadership have evolved from these approaches (Northouse, 2004, Hersey et al 2001, Lambert et al, 1995 and Lambert, 2003): transactional, transformational, situational, and constructional. Seven core functions of school leadership have been identified (Portin, 2004): instructional, cultural, managerial, human resources, strategic, external development and micro political. The question arises as to which leadership approach best supports the attainment of the seven core functions of school leadership?

Transactional Leadership

Transactional leadership refers to a process in which leaders give rewards and punishments as consequences to follower behavior in order to attain the goals of the organization (Yukl, 2002). The transactional leader is most concerned with the minute-to-minute minutiae of school activities. Peters and Waterman (1982) refer to transactional leadership as boring, encouraging, and tough when necessary, with the occasional use of raw power. The transactional leader accepts and works within the existing school structure.

Transformational leadership

Transformational leadership relates to a process in which leaders and followers raise one another to higher levels of morality (Northouse, 2004). The transformational leader creates an awareness of the importance of the task, asks the follower to look beyond personal needs to the needs of the organization, and cultivates what Maslow (cited in Greenberg and Baron, 2003) referred to as "self-actualization". In this way the transformational leader shapes values, sets the benchmark of self-sacrifice for the organization, and is the definer of meaning for the organization and the followers (Bennis and Nanus, 1997).

Situational leadership

Situational leadership focuses on the circumstances of the situation. The situation defines what leadership behavior is required. Hersey, Blanchard and Johnson (2001) described four leadership behaviors: high directive and low support, high directive and high support, low directive and high support, and low directive and low support. These behaviors range from transactional to transformational. Which style the leader uses depends on the readiness of the follower to accomplish a task. External and intrinsic rewards or consequences are used, based on the ability of an employee to accomplish the task and the general circumstances of the organization.

Constructional leadership

Constructional leadership refers to a reciprocal process that enables participants in an organization to construct meanings that lead toward a common purpose (Lambert et al, 1995). Leadership transcends individuals, roles and behaviors. It is possible for anyone in the organization to engage in leadership

behavior. Leadership develops through the relationships in the organizational community, rather than from a set of behaviors performed by an individual leader. It would be difficult to categorize this type of leadership as transactional, transformational or situational since the distinction is blurred between follower and leaders because influence is viewed as a reciprocal process.

Analysis and conclusions

Each leadership theory has advantages and disadvantages in reference to education. Strong leadership is needed, especially now, as schools are establishing stricter teaching and learning standards and teachers and administrators are being held more accountable for student achievement (Levine, 2005). Teachers are expected to attain a higher set of values and professional self-actualization as their jobs becomes more difficult and stressful. Concurrently, administrators are expected to take the role of instructional leader for the school. If teachers do not adapt by incorporating best practices identified through educational research, educational leaders may resort to using material rewards and punishments. School leaders are forced to wear two hats, a transformational hat and a transactional hat. In practice, most school administrators engage in an eclectic combination that is predominantly a situational approach. These approaches represent a top down model of leadership. As the designated instructional expert, the leader seeks to motivate by controlling rewards and punishments. None of these three approaches to educational leadership are particularly effective, however, in motivating teachers, in establishing a positive school culture, or creating a positive environment for either teaching or learning (Frost and Harris, 2003).

In education, an approach to leadership is needed that is not based on one individual influencing many. The nature of education requires influence to be reciprocal (Lambert et al, 2002). Leadership, thus, becomes a mutual process in the educational community. The members of the community develop and construct the meaning and direction of the educational process by focusing on one goal of schooling, preparing students to be productive citizens in a democratic community (Pring, 2004). This type of leadership acknowledges that no one person is the expert and no one person is responsible for motivation. Each member of the educational community is responsible for taking a leadership role. The result is a staff that engages in a process of reciprocal influence. Instead of a top-down model of leadership, a bottom-up model is adopted. The resulting organization equips people to envision a higher ideal, to manage day-to-day activities and to be better able to address and respond to their unique situations and settings. Admittedly, this is idealistic and requires a dedicated, motivated staff of professionals willing to take responsibility for their actions and outcomes. This paradigm shift in educational leadership is needed. A constructivist approach to school leadership provides the vehicle for such a shift.

Conceptual Framework

Expertise requires knowledge, practice and experience (Gardner, 1993; Ohde and Murphy, 1993). Leaders move from novice to expert as they develop the ability to make explicit their thinking about problem-solving processes, (Danzig and Harris, 1996). This is important because there is a relationship between effective problem-

solving, explicit reflection and the explanation describing the problem solving process and leadership effectiveness (Hallinger et al, 1993; Leithwood and Steinbach, 1993; 1995). One could conclude that for novices to become successful they must develop reflective skills that facilitate a more detailed explanation of the problem solving process. It is the reflective process that makes it possible to learn from their experience and the experience of others, (Schon, 1991). A potential approach is through narratives, the exploration of lived experiences, because stories provide a basis for understanding how people think and act in the world (Clandinin and Connelly, 1990). Stories provide a way for pre-service leaders to move to a deeper level of understanding of the process of solving problems of leadership practice. Popular leadership theory assumes that leaders can become more effective in their decision-making with training. . Stories that reflect real school issues lead to new understanding by linking the study of leadership to the practice of leadership (Richardson, 1994). Clandinin and Connelly (1990) describe a process of "restorying" that enables the leader to relive past decisions and construct new meaning to the decision making process. Schon (1991) in his book, The Reflective Practitioner, emphasizes the importance of reliving daily experience through reflection on the narratives of day-to-day situations. Learning takes place at the practical level when narratives about personal experiences and practical experiences based on real school issues are developed and relived.

Significance to Educational Leadership

Adept problem-solving skills are a predictor of effective leadership in education (Wagner, 1993). However, providing information about and experience with the process of solving problems of practice for future leaders in education is difficult (Danzig 1997). Although often well versed in theory, novice leaders in education complain that they are not prepared for the moment-to-moment demands of their job. Boyce (1996) suggests that an effective way of relating the practical application of theory to the reality of the requirements, responsibilities and problem-solving skills of persons in positions of educational leadership is through narratives or stories of leadership that can be used for reflection, discussion and/or reenactment. The development of such a hermeneutic heuristic process would provide a way of using the wealth of tacit information embedded in narratives of practice. Quong and Walker (1999) provide and discuss a framework for analyzing leadership stories. Their premise is that leadership narratives contain knowledge that is essential and critical for emerging leaders to understand. These authors developed a model or framework for analyzing narratives, based on Context, Intuition and Influence cues, and it is referred to as the CII Frame. This model has the potential of assisting leadership students in interpreting the stories of leaders by helping them recognize the context, the intuition, and the influences surrounding a leader's approach to the resolution of problems of practice. Students can then begin to develop their own ideas and confront their own biases about leadership and identify strategies they would use to solve problems of practice. The CII Frame provides both a hermeneutic process and a heuristic framework for analysis and critical reflection about the stories of

leaders, which could be used to support the development of effective problem-solving processes. One of the strongest arguments for using this framework is that it increases the probability that "telling and analyzing stories allows leaders and others to examine their own filters, or biases, in order to get a more complete understanding of what is important to them, and how this influences how they handle problems and situation" (Danzig and Harris, 1996).

Quong and Walker (1999) have succeeded in using narrative to demonstrate and illustrate their point of view. Their underlying perspective is interpretive/critical (Cohen et al, 2003). The authors emphasize that leaders can use their own personal narratives to identify and confront their own biases in a given situations. Likewise, listeners can identify their biases by monitoring their own responses to a leader's decisional patterns, as revealed in personal leadership narratives.

A normative interpretation of the Quong and Walker (1999) study would indicate that there might be a relationship between confronting personal biases and the ability to think about and explain how to solve problems of practice. This type of analysis of leadership gives pre-service leadership students a way to understand the knowledge, influences and understandings that leaders have learned and stored through years of experience. In analyzing narratives using Quong and Walker's model, the CII Frame, is neutral to the style of leadership, a particular situation, or any set of contingencies. Leadership skills theory (Northouse 2003) predicts that training designed to guide reflection and teach specific skills will have an impact on the behavioral characteristics of the leader and the quality of subsequent leadership effectiveness. Quong and Walker's CII Frame model of analysis provides students

three ways to know, analyze and think about leadership. In addition, the normative, interpretive, critical, and dialogic discourses of narrative provide four dimensions for considering and confronting the students' own potential leadership styles and stories. Therefore, applying the CII Frame to educational leadership stories provides a way to determine if providing training to identify intuition, influence and context increases leaders' ability to think about and explain the solutions to problems of practice; thereby becoming better problem-solvers and, potentially, more effective leaders (Leithwood and Steinbach, 1993).

Organization of the study

The study is organized into five chapters designed to provide insight into the possible relationship between training to identify context, influence and intuition statements embedded in narratives of leadership practice and the explicitness of explanations used to describe the solution to problems of leadership. Chapter I provides an introduction and background to the study; Chapter II includes a review of the literature; Chapter III details the research procedures and methods; Chapter IV summarizes the findings and possible conclusions, and Chapter V concludes the study with a discussion of the meaning of the findings for administrative practice and recommendations for future research.

More explicitly Chapter I the introduction and background provides a discussion of approaches to leadership in education. The conceptual framework for the study is also presented. In the final section, an argument justifying the significance for the study to education and leadership theory is developed.

In Chapter II, current theories of leadership are discussed. The use of narrative in research and its usefulness as a paradigm is presented. Supportive research linking leadership, narrative and problem solving is provided. Finally, a short summary tying leadership theory, narrative and problem solving together is provided as the basis for the research questions investigated in this study.

A detailed description of the research procedures and methods is presented in Chapter III. The major problem the study is designed to investigate is stated and research questions are extrapolated from the major problem of the study. The method used to identify and choose participants is outlined and the procedures used to conduct the research are detailed. The actual recruitment procedures used are described. The modifications made to the procedures as problems of participation developed are discussed. The procedure and instrument used to score the participants' responses are described. Techniques used to analyze the data are given. And the limitations of the study are developed and discussed.

In Chapter IV, the findings are presented and summarized, possible conclusions are introduced, a discussion of the findings and the meaning of the findings are introduced, and a summary is provided.

Suggestions are given for future research, based on the findings, limitations and theoretical basis of the study in Chapter V. An explanation of what the findings of this study mean in relation to administrative practice and pre-service leadership training is also provided.

CHAPTER II

REVIEW OF LITERATURE

Leadership Theory

A variety of publications that range from scholarly (Yukl, 2002) to spiritual self-help (Hayford, 1994) discuss leadership, in terms of influence, vision, emotional resonance, regulating, and articulating. These perspectives are a function of two variables: the researcher's perspective and the phenomenon under investigation (Yukl, 2002). Leadership is the act of inducing followers to pursue goals that represent the values and motivation (wants and needs, aspirations and/or expectations) of both the leader(s) and followers (Phillips, 1992). Leadership is about having a strong determination to achieve a goal or realize a vision/conviction, having the capacity to generate and sustain trust, having an uncanny way of enlisting people to the vision, and having a bias toward action that results in success (Bennis and Nanus, 1997). Leadership is the ability to influence others to understand and agree, and the ability to facilitate individual and collective efforts to accomplish shared objectives (Yukl, 2002). Leadership is influencing the behavior of an individual or group, regardless of the reason (Hersey, Blanchard and Johnson, 2001). Leadership is about markedly influencing the behaviors, thoughts, and/or feelings of a significant number of fellow human beings through storytelling. It is about changing the thoughts, feelings, and/or behaviors of a significant number of other people (Gardner, 1995; Gardner, 1999). Leadership is directing and/or regulating the activities or course of a person or group (Hayford, 1994). Leadership is about articulating visions, embodying values, and creating an environment within which things can be

accomplished (Yukl, 2002). At the heart of each definition is problem-solving (Northouse 2003; Yukl, 2002). A leader must make decisions on a day-to-day basis that promote the vision and goals of the organization and the stakeholders involved. In education, a leader must accomplish this with limited or no transactional or coercive power over individual stakeholders.

From these approaches, several leadership theories have been developed which focus on a number of factors: the traits, skills, and style of leaders; the situation, the particular contingencies, and the leader-follower exchange; whether the process is transformational or path-goal; the individual or a team as the leading unit; and on the psychodynamics and cognitive processes of the leader (Northouse, 2003). Approaches that are very popular in business are the skills approach, situational-contingency approach, the psychodynamic approach, the behavioral approach, and cognitive approach(Kaye and Jacobson, 1999).

Skill theory

Skill theory identifies several skills that are common to most leadersacr oss situations, such as problem-solving skills, social judgment skills, and reflective skills (Northouse, 2003). Adherents to skill theory in education identify expert leaders and catalogue the leadership behavior they engage in as they go about their day-to-day activities (Leithwood et al, 1993). As a result, a list of best practices for leadership in education is developed and a series of skills supportive of the best practices (Levine, 2005) are identified. The basic assumption of skill theory is that these skills can be learned, thereby increasing the effectiveness of the leader.

Situational theory

Situational theory supports the idea that a leader can also be trained to recognize that the effectiveness of various styles of leadership is dependent on the defining parameters and contingencies of the situation, (Hersey, Blanchard and Johnson, 2001). At the crux of these theories is the belief that pre-service leaders can learn leadership skills and effectively differentiate situations while performing day-to-day responsibilities.

Psychodynamic theory

From a psychodynamic approach, pre-service leaders benefit from reflecting on cues in leadership narratives in the same way they learn from reflecting on their own past relationships with authority or leadership role models (Northouse, 2003). This reflection and deliberation provides a mechanism for understanding and change (Clandinin and Connelly, 1990). Psychodynamic theory assumes the individual is internally motivated to improve. The mechanism for improvement is reflection on past behavior and experiences with the intent of gaining understanding of the self. The person's past history shapes how reality is both perceived and understood. Narratives and dialogue (Clandinin and Connelly, 1990) support the construction of meaning and understanding by providing a means of reliving past leadership experiences. Effective leadership develops as a result of decreasing the tension that is developed by the differences between the leader's personal reality and the events, actions, and circumstances in the world.

Behavioral theory

Behavioral psychologists define reinforcement as the mechanism for establishing leadership skills and effectiveness. It is a mechanistic and deterministic notion that leaders respond to both negative and positive consequences and adjust their leadership skills and styles as a result (Greenberg and Baron, 2003). The underlying assumption is very similar to skill theory. If the leader learns to use the skills associated with identified best practices in educational administration, then the leader will be more effective. The mechanism for acquisition of these skills is based on positive and negative consequences of leadership behavior. Behavior theory predicts that over time, ineffective leadership behavior is weakened through adverse consequences and effective leadership behavior is strengthened through positive consequences (Northouse, 2003).

Cognitive theory

Cognitive psychologists provide a more reflective and deliberative framework for understanding how and why learning leadership skills takes place (Clandinin and Connelly, 1990). In a cognitive approach, which seeks to describe the mechanisms of memory, reasoning, problems solving and the interaction with the environment, Gardner (1999) presents a theory of how individuals learn and reason. In his early work, Gardner (1991) developed a construct, the "unschooled" mind, which indicates that by the age of five, individuals develop strong ideas about how the world works. Gardner (1991) refers to this phenomenon as unschooled because it is based solely on an individual's interaction with the environment and not on formal schooling. It is the tenacity with which individuals hold to these unschooled

presumptions that cause problems in learning. Applying Gardner's ideas to leadership training suggests that requiring reflection on personal beliefs with conflicting evidence in leadership narratives is necessary to facilitate establishing effective practices, including the ability to reflect on and describe the problem solving process, (Hallinger, Leithwood and Murphy, 1993).

Skills, situational, behavioral, psychodynamic, and cognitive theories generally posit that it is possible to also learn the ability to identify context, influence, and intuition cues. The idea that training to enhance this ability will change how leaders think about and explain their processes of problem- solving is the focus of this research.

Narrative

Storytelling, as a way of transmitting information, ideas, values, norms, morals, and expectations, is well documented in the social sciences (Boyce, 1996; Mumby, 1997). Howard Gardner, in Leading minds: An anatomy of leaders (1995), notes that the storytelling model can be used at two levels: a macro level, to analyze the reasons leaders became so popular (e.g. Mahatma Gandhi, Ronald Reagan, Albert Einstein, Margaret Thatcher) and a micro level to describe or account for how individuals develop a sense of identity. From an interpretive critical perspective, Boyce (1996) concludes that storytelling can prepare groups or individuals for planning and decision-making, consistent with the shared organizational reality.

There is a growing body of literature that discusses both why and how storytelling has a role in preparing groups or individuals for leadership (Danzig, 1997; Gold & Holman, 2001; Swap, Leonard, Shields & Abrams, 2001). Beverly

Sypher (1997) believes that the narrative approach is especially helpful as a teaching tool. When students read accounts, stories, testimonials or narratives and then use them as the basis for discussion, role-plays, and other group activities, a deeper, richer understanding of the situation is gained. Sypher (1997) also believes that it is possible to use the narrative as a model for understanding organizational communication and organizational leadership. Business is filled with accounts of how storytelling is used to develop effective leadership (O'Connor, 2002; Cohen & Mallon, 2001; Fleming, 2001). Much of what is communicated in organizations is not explicit (Swap, Leonard, Shields, & Abrams, 2001), but, rather tacit in nature (Jablin and Putnam, 2000). Leaders are hoarders and protectors (Quong & Walker, 1999) of specific information about how they do their job and it is this knowledge that they use to make decisions on a day-to-day basis.

The use of narrative has three distinct functions; epistemological, rhetorical, and skill-developmental. Using narrative not only functions to provide a way of knowing and aiding the development of an argument for a particular point of view; it also provides a means of developing skills. The mechanism rests on the processes of reflection and deliberation (Schon, 1991).

Supportive Research

Quong and Walker (1999) emphasize the importance of storytelling for professional growth and for understanding professional practice. They believe that stories told about leadership in school settings provide an opportunity for learning about school leadership. They assert, however, that it is not enough to create a storytelling-rich environment if no one is listening. On the other hand, if people are

listening, there is little enlightenment if the listener is not attending to the desired cues.

Quong and Walker (1999) make an argument for a heuristic device that focuses on identifying the context, intuition, and influence (the CII Frame) elements embedded in leadership stories. The authors believe that using the CII Frame is potentially a useful pre-service training tool for leaders in education, since it is difficult for students to gain the necessary experience required to deal with the dynamics of the actual work. The CII Frame may serve as a surrogate for experience. It is presumed that students can read, listen, watch, or act out actual stories of leadership and, with guided attention to salient cues, gain valuable insight into how to perform on the job. This same idea is one of the benefits of the narrative approach to organizational communication (Sypher, 1997). Applying these findings leads directly to the current research question: will providing training in identifying the CII Frame cues of context, intuition and influence enhance the ability of novice leaders to think about and explain the process involved in solving problems of practice? Research suggests this will result in improved practice of actual problem solving (Leithwood and Steinbach, 1993) and form a scaffold between theory and practice (Danzig, 1997).

If storytelling can be an effective tool in teaching leadership skills, then it is important to gain a better understanding of *story*There are various definitions of story (Sarbin, 1986) and some discourses refer to story as narrative (Danzig, 1997). Although not explicitly addressed by Quong and Walker (1999), Theodore Sarbin's is one accepted definition of story. He sees it as

> "a symbolized account of actions of human beings that has a temporal dimension. The story has a beginning, middle, and an ending. The story is held together by recognizable patterns of events called plots. Central to the plot structure is human predicaments and attempted solutions" (1989).

From a review of literature, Sarbin (1986) reported a consensus about the idea that "life is a story we live by" and an acknowledgment that everyone makes meaning by listening to and acting out stories. Howard Gardner (1995), in the introduction to Leading Minds, emphasizes that most, if not all, of the ways people construct understanding of the world is through stories. Further, interaction with the world is based on how people assimilate the conflicting stories that arouse and sustain their attention and justify and guide their actions (Gardner, 1995). Putnam & Fairhurst (2000) emphasize the importance of storytelling by all discourses (normative, interpretive, critical, and dialogic) as a crucially important concept in organizational communication. Storytelling could be used in training school leaders, since schools are social organizations composed, formed and sustained by the lives of individuals. It is accepted as axiomatic that leadership stories are filled with knowledge (Boyce, 1996). This knowledge includes information about the leader, the context or situation, insights into a leader's intuition, including the factors from which a leader constructs meaning, and factors that are specific to a particular situation. This knowledge or information is tacit. It is not written, archived or normalized in any formal way by the leader. It is simply the collective story of everyday life constructed from decision-to-decision or event–to-event. It is the observer's task to learn how to garner the knowledge within such a story-rich environment. Quong and Walker (1999) focus on three concepts through which to study and understand the stories of effective leaders

in education. Their model, the CII Frame indicating Context, Influence and Intuition Framework is the foundation of a hermeneutic heuristic (a technique facilitating the reflection on a narrative from several different points of view with the purpose of gaining deeper understanding of one's beliefs and understandings).

Some basic assumptions underlying the CII Frame are that knowledge can be gained through understanding the patterns of social interaction, meanings are contained in stories, and people are a product of social and historic conditioning. This knowledge will enable people to be more explicit in their understanding and more explicit in their explanation of their thinking about problems of practice. Further, the CII Frame assumes that leaders' actions have meaning, purposes, and interpretations specific to the leader and are within a context that governs their behavior to a certain extent, and that the stories that develop as a result of the individual/environment interaction are not haphazard or irrational. The CII Frame is especially useful because it is based on the premise that "…such stories hold important clues into how leaders perceive the organization and their roles within it and, subsequently, how and why they approach decision-making, relationships and change" (Quong & Walker, 1999). In order to understand and benefit from these clues, the listener needs to have a framework from which to interpret the leader's story, as told through dialogue and discussion. Does context (the specific setting in which the story takes place and the meaning the leader places on this), influence (beliefs, values, and way of viewing the world) and intuition (the subjective opinions and ideas which have developed from previous experience and through the leader's life history) provide the necessary framework for understanding how to reflect on solving problems of practice? Will

providing a framework for reflecting and deliberating on problems result in an increase in the details students use to describe how they solve problems of educational leadership? Will they go beyond the typical six-step problem solving algorithm: identify the problem, gather information, brainstorm solutions, choose a solution, implement the solution and evaluate the outcomes (Beebe and Masterson, 2003)? The answer to this question is important because there is evidence that links the detail used to describe the problem solving process to the quality of the solution, resulting in effective school leadership. Better problem-solving means better leadership (Hallinger, Leithwood and Murphy, 1993).

Summary of the Theoretical Basis for the Research

The research question for this study is based on both research about leadership that suggests that stories are rich with information and research about the use of narrative as a teaching technique. The idea that leadership is based on skills that can be learned is fundamental to the skill theory of leadership. The importance of learned leadership skills is also implied in various other theories of leadership, such as the cognitive theory of leadership and the psychodynamic theory of leadership. If these theories are accurate, training designed to help leaders frame/structure the way to think about problems of practice should result in an increased ability to be more explicit in thinking about and explaining their problem-solving process. The key point is that problem solving is a skill critical to leadership (Yukl, 2002; Bennis and Nanus, 1997; Peters and Waterman, 1982; Goleman, Boyatzis and McKee, 2002). There are several studies that suggest that narratives of practice are rich with context, influence, and intuition cues (Schon, 1991; Leithwood and Steinbach, 1993; Lambert et al,

1995). It is this information about the day-to-day problems of leadership that is difficult to communicate formally to students of leadership. It has been established that narrative can be used successfully to train and develop leadership skills (Danzig and Harris, 1996). Thus, theoretically, narrative could be used to train pre-service leaders to identify context, influence, and intuition cues in stories of leadership. As a result of such training, they will be more explicit in thinking about and more adept at solving problems of practice.

CHAPTER III

RESEARCH PROCEDURES AND METHODS

The purpose of this chapter is to describe the research design and methodology of this research. The chapter is organized into sections: statement of the problem, research questions, the identification and selection of the sample, research procedures, recruitment procedures, modification to the procedure, instrumentation, analysis of the data, and limitations of the procedure.

Statement of the Problem

Novice leaders may experience frustration and feel inadequate in meeting the needs and demands of solving day-to-day problems of practice (Danzig, 1997). Levine (2005) and Orr (2003) have identified bridging the gap between theory and practice as one of the major deficits in school administrator preparation programs. In earlier work, Hallinger, Leithwood and Murphy (1993) provided evidence that instruction on the procedures or behavior of leadership did not result in adequate preparation of students for the day-to-day demands of leadership. They concluded that in order for training to be effective, it needed to focus on the thinking processes of expert leaders, or habits of mind (Costa, 2000) that guide leadership behavior. Quong and Walker (1999) have identified three variables: context, influence and intuition that expert leaders think about while solving problems of practice. Educational leadership programs have used case studies to teach problem-solving skills. Narrative has also been used for students preparing to be administrators by requiring them to reflect on narratives of problem situations and solutions as a way of challenging their own biases regarding leadership. However, no studies have been

done that ask participants to focus their reflection of narratives on specific variables about which expert leaders think while solving problems, such as context, influence and intuition.

This research was designed to investigate the effect of instructing novice leaders to reflect on context, influence and intuition statements contained in narratives of practice, in terms of the amount of detail they use to describe how they would solve a problem of practice. The investigation of this process was intended to provide direction for the future training of students preparing to be administrators by providing them insight into the habits of mind of expertleaders, thus bridging the gap between the theory and practice of leadership. The research is based on cognitive theories of leadership developed by Leithwood and Steinbach (1993) and Gardner (1995), which suggest that the psychodynamic mechanism of reflection can be used to change how novice leaders think about and solve problems of practice, thus aiding in the development of habits of mind associated with expert problem solving.

Research Questions

The research question of this study is whether providing the opportunity for pre-service leaders to identify and reflect on context, influence and intuition statements embedded in narratives of leadership practice will have an effect on the way novice leaders think about and explain how they would solve a leadership problem. Ultimately, one might ask if there is a relationship between training participants to identify and reflect on context, influence, and intuition cues in stories of leadership practice and the level of explicitness used to describe the process of solving problems of practice. An answer to this question will help determine if

cognitive factors involved in problem solving can be learned through the psychodynamic process of reflection. Participants who identify and reflect on context, influence and intuition statements in interviews they conduct with experienced administrators and subsequently offer more detailed explanations when asked to describe how they would solve a leadership problem would demonstrate that the habits of mind involved in problem solving can be acquired through a process of reflection. Such a finding would provide support for cognitive theories of leadership and a psychodynamic mechanism for the acquisition of leadership skills.

In order to answer the primary research question, several secondary and related research questions were addressed and are proposed below.

- Do novice leaders differ significantly in the detail they offer in describing how they would solve a leadership problem?
- Will novice leaders modify a previously offered solution after interviewing an experienced administrator with the intent of identifying and reflecting on statements containing context, influence and intuition?
- Will novice leaders offer a solution to a leadership problem with more explicit statements of context, intuition and influence after interviewing an experienced administrator when compared with participants who did not interview an administrator?

Identification and Selection of the Sample

Educators employed by the Department of Defense Dependent Schools (DoDDS) were selected as the population from which the participant sample was drawn. This population was selected for study because the author is also employed by DoDDS as an educator. Familiarity with the rules for conducting research in the DoDDS system, convenient access to its school locations all over the world via e-mail and the military postal system and knowledge of the leadership promotion system made choosing this population both convenient and practical. The author's participation in yearly leadership training events and conferences within the system provided a list of aspiring leaders who could be easily contacted and asked to participate in the study. All of the participants in the study are educators who have been or are in teacher/leadership positions in their school. The office that supervises research at the headquarters for DoDDS worldwide was contacted, the appropriate forms and letters were completed and permission was requested and received at the school, district and area levels. Permission was given at all levels and potential participants were contacted. External validity in relation to all educators was not controlled, only educators in the DoDDS system were used in the experiment. Even though educators in the DoDDS system are recruited from the public sector, it is not possible to rule out differences that may exist. For instance, DoDDS educators generally enter the DoDDS system after several years experience in public education and must pass a number of examinations and a physical examination, plus live as expatriates and learn to adapt in foreign cultures. These characteristics may be

associated with a heightened ability to attend to such variables as context, external and internal influences and intuition.

Research Procedures

A true experiment was conducted and a Solomon four-group design was used to control possible interaction between the pre test and the treatment (Schutt, 2001). Participants were randomly assigned to one of four groups.

Group One was given a problem scenario (see Appendix 1 for the complete set of instructions sent to the participants) and asked to complete the following tasks:

1. Read the scenario provided;
2. Identify the primary problem(s);
3. Identify secondary problem(s);
4. Provide supporting evidence used to identify the primary and secondary problem(s);
5. Develop possible solutions or alternative solutions;
6. Evaluate the possible solution developed;
7. Select the solution most likely to solve the problem;
8. Describe how to implement the selected solution and
9. Include any additional thoughts or reflections regarding the scenario and the selected solution.

The purpose of Group One was to determine the general level of detail participants use to describe a problem of practice. It was assumed that random assignment would control for previous training or a natural tendency to use context, influence and intuition statements when describing their solution to problems.

Group Two was asked to interview an administrator and write a summary of the interview. These participants were asked to include in their interview summary comments the administrator made referring to context, influence and intuition variables when solving problems. The summary was not to exceed two double spaced pages. The complete instructions for the interview can be found in Appendix 1. Once the interview was completed and the summary sent to the experimenter, a problem scenario was sent to the participant. The problem scenario was the same as the problem sent to Group One. The purpose for Group Two was to control for any possible effect solving the problem scenario might have had on the effect of the treatment.

Group Three was given the same problem scenario as Group One. After solving the problem, participants sent their solution to the experimenter. The experimenter waited two weeks and then resent the problem scenario with the same instructions given originally. The purpose for Group Three was to determine if participants would add to or change their original solution if given a second chance to solve the same problem. The second scenario was sent two weeks later to match the time given to participants in Group Two to complete the interview and summary. Another purpose for Group Three was to control for possible practice effects in solving a problem scenario.

Group Four was given the problem scenario. Once the solution was received by the experimenter, instructions for the experimental intervention were sent. Once the summary of the interview was received by the experimenter the problem scenario was resent. The purpose of Group Four was to determine if being directed to pay

attention to context, influence and intuition as an important part of the problem solving process would provide incentive for revising or adding to their previously submitted solution.

Table 1 provides a summary of the groups used the in the experiment.

Table 1

Summary of Groups Treatment

Group	Pre-test	Experimental intervention	Post-test
1			O
2		X	O
3	O		O
4	O	X	O

(O indicates the group received a pre-test and/or post-test. X indicates the group received the experimental intervention)

Group size was set at 10 each. The size of the group was based partially on the need to have enough subjects per group to make statistical comparison meaningful and partially on the practical consideration that there are only a finite number of potential participants. Although there are several thousand educators in the DoDDS system in Europe, only a small percentage of these educators aspire to seek a leadership role.

Expected Results

It was expected that the post-test scores for the groups receiving the pre-test and/or post-test only, groups One and Three, would be the same and that the post-test

scores for groups receiving the intervention, groups Two and Four, would be the same. It was expected that there would be no differences in the pre-test scores for any groups. It was also expected that the pre-test given to Group Four would not affect the post-test score. Since the purpose of the experimental intervention was to increase the participants awareness of the importance of considering context, influence, and intuition cues when solving problems it is expected that the post-test scores for the experimental intervention groups will be higher than the post-test scores for the groups not receiving the intervention. The experimenter expected a wide range in the scores within each group because of the wide range of experience of the participants recruited for the study. Since the participants were randomly assigned to each group it was expected that the level of experience would be equally represented in each group. There has been some connection made between experience and problem solving expertise (Leithwood et al, 1993) which would manifest itself in the study as a higher score for more experienced educators and a lower score for less experienced educators. As a corollary to the anticipation of a wide range of scores, it was expected that the range of the post-test scores for the groups that received the intervention would be narrower than the range of pre-test scores.

Experimental Conditions

Pre-test and Post-test

The following problem scenario was given to the participants as the pre-test and post-test:

The Scenario[1]

The Background:

The day is October 23rd, and it's your first day as principal of Southside Middle School. School has been in session for several weeks, and in late August the previous principal (a 15 year veteran in the position) made a last minute decision to retire. His retirement was unexpected, but he agreed to stay on until a replacement was found. The school district needed to post the position and hire a new principal within the guidelines of the district's Department of Human Resources. You applied for the job in early September, and after five rounds of interviews, you were offered and accepted the position at a Board of Education meeting on October 1. You gave notice to your current employer, completed your responsibilities, and prepared to step in as the new principal at Southside Middle School.

The School:

Southside Middle School is located in a rim community of a major American city. Classified as an urban/suburban school, the school houses approximately 1,000 6th, 7th, and 8th graders. The ethnic makeup of the school is 40% African-American, 20% Latino, 30% Caucasian, and 10% Asian. There are two veteran assistant principals, one of whom applied for your job, and 80 faculty members, comprised of an equal mix of veterans and rookies. The school also has a non-certified staff of 30. A strong union represents both faculty and staff; in fact the president of the teacher's union is a faulty member at your building.

Over the last several years, state test scores have continued to decline. The school climate reflects an apathetic attitude of a small number of disengaged faculty who are presently staunch resistors to any school improvement initiative. This small group of faculty has bullied other faculty members into believing that the responsibility for school improvement in terms of climate and academics lies elsewhere. Discipline is an increasing problem. Faculty and staff have determined that sending students to the principal's office is the only course of action.

[1] Scenario present during a Leadership workshop (June 2004) by Dr. Steve Edwards and presented here with the permission of Dr. Edwards.

Day One:

It is 7:30 AM, Monday, October 23rd. You just walked in to the main office at Southside Middle School, where faculty and staff are required to arrive by 8AM, with the 1st class beginning at 8:20.

The participants were asked to read the scenario; identify the primary problem(s); identify secondary problem(s); provide supporting evidence used to identify the primary and secondary problem(s); develop possible solutions or alternative solutions; evaluate the possible solutions developed; select the solution most likely to solve the problem; describe how to implement the selected solution and include any additional thoughts or reflections regarding the scenario and the selected solution. (See Appendix 1 for the detailed instructions for the pre- and post-test.)

Experimental Intervention (Training)

The experimental intervention consisted of three parts. In the first part the participants read a short statement about the importance of context, influence, and intuition in the problem-solving process. In the second part the participants were asked to interview an administrator of their choice. As part of the interview the participants were instructed to ask the administrator to describe a problem they had solved sometime in the past. Specific instructions were given to the participants to ask about the context of the problem, any internal or external influences considered when solving the problem, and how they knew their solution would work. In the third phase of the intervention, the participants were asked to write summaries of the interviews, not to exceed two double-spaced pages, in which they were to discuss the role context, influence, and intuition played in the solution process. The complete instructions for the experimental intervention can be found in Appendix 1.

Recruitment Procedures

Participants were contacted via e-mail. The author contacted participants from lists of educators who attended leadership training workshops and were teachers in the Europe Area who had demonstrated leadership by serving as a Chairperson of a Department or Chairperson of a School Improvement Leadership Team. A total of 60 educators were contacted initially in order to recruit 40 volunteers. Each potential participant was sent an electronic copy of the consent form required by the Institutional Review Board. In addition, a short statement about the purpose of the experiment and the fact that if they participated they would be assigned to a group on a random basis was given to each participant. A copy of the statement and the consent form describing the study and expectations can be found in Appendix 3.

Modifications to the Procedure

Forty participants volunteered and were randomly assigned to one of the four groups. The appropriate materials were sent to each participant. Unexpectedly, the participants in the groups that required an interview with an administrator did not complete their task in a timely manner. This researcher contacted them and found that the participants either said they did not have time to conduct the interview, would not feel comfortable conducting the interview, or gave no reason and chose to drop out of the study. Only two of the original 20 assigned to the groups requiring the interview actually completed the interview. It was decided that the procedure needed to be modified to accommodate for the problems the requirement of an interview had caused (Butler, 2006). The author conducted an interview following the instructions given to the subjects, transcribed it and gained the approval of the administrator

interviewed to use it in the experiment. A copy of the interview is included in Appendix 2.

Twenty five more educators were contacted and 18 agreed to participate in this study. Of these 18, all but four completed the tasks. The data collection was commenced in November 2005 and completed in February 2006. At the end of the data collection period, only 6 participants in each group had completed the task or tasks assigned to them. The participants who had not completed the tasks were contacted and asked if they were going to complete the tasks assigned to them. In each case, they either said they did not have time or had decided not to participate.

Instrumentation

A rubric was developed to quantify the amount of context, influence and intuition used by the participants to solve the problem and can be found in Appendix 5. Each solution was scored blind. The scorer did not know either the group assignment or whether the solution was a pre- or post-test. An experienced, research-oriented educator was recruited to score the solutions and was trained by the author using the rubric. After scoring several solutions it became clear that the rubric was not proving useful in reflecting the context, influence and intuition statements included in the solutions. The rubric was designed to measure the explicit reference to the importance the participant placed on context, influence and intuition in identifying and solving the problem scenario. While participants did include the inferred importance of context, influence and intuition as part of the problem solution, few provided a rationale for including these aspects of insight in their discussion of the solution. The author decided to instead, count the number of statements that had

context, influence or intuition. The definition used for context, influence and intuition was the same as Quong and Walker's (1999).

A "Context" statement was defined as any statement that made reference to one or more aspects of the organizational environment or structure within which the problem is embedded, e.g. culture, values, norms, place within a hierarchy, accepted practices, etc. The following is an example of a context statement written by one of the participants: "While the principal may not be able to have much impact on a building initiative to reduce school population, the sheer size of the student population will have an impact on dealing with problems in the school and must be recognized as a significant factor." The comment 'sheer size' is a context statement referring to an aspect of the environment, size.

An "Influence" statement was defined as any statement that was a reference to an underlying personal value, including reference to avoiding conflict, job security, supporting diversity, fair treatment of individuals or minorities, career advancement, individuality, etc. The following is an example of an influence statement written by one of the participants: "..in evidence supporting primary and secondary problem I think that because of the disengaged and apathetic faculty, test scores are declining. I think that good teaching is the result of relaxed and confident teachers who love or at least enjoy, the job they do." This statement is an example of influence because of the statement "good teaching is the result of relaxed and confident teachers" is a personal belief of the respondent.

Statements involving "Intuition" made reference to the importance of personal knowledge based on previous life experience and/or worldview. The following is an example of an intuition statement written by one of the participants: "When kids are acting up in class it has been my consistent experience that when I ask Do you want to spend the first part of lunch with me? the behavior immediately stops." The words "my consistent

experience" are a statement of intuition because the solution chosen by this participant based on their past experience.

Examples of statements that contain no context, influence or intuition written by several of the participants are: "I will ensure that the staff knows, while entering the school that there is an emergency staff meeting at 8:05 in the auditorium"; "I would look at patterns of discipline referrals and keep records of offenders and teachers referring them. (Not a teacher-witch-hunt…just finding out where and what kind of help was needed.)" and "To make a good impression, it would be a short faculty meeting with each teacher required to not a policy that they feel needs reworking to get out the door."

In order to determine inter-rater agreement in the use of the definition of context, influence, and intuition to score the participants' solutions, the author and the scoring educator independently scored 5 solutions. The scores awarded by the author and the scoring educator were then compared. In all but one solution, the context, influence and intuition score was the same. The one different score differed by 1. It was concluded that the scoring procedure was reliable, i.e., both scorers gave the same score to the same solution. The scoring educator scored the remaining 19 solutions.

Analysis of the Data

A score was given for each solution by counting the number of times context, influence, and intuition statements were used in the description of the problem-solving process. An ANOVA was conducted in order to determine if there was a statistical significance between the groups' pre and post-test scores, the groups' post-test scores, and the score of groups receiving the experimental intervention and the groups not receiving the experimental intervention. Although determining statistical

significance is an important process of analysis, other information about the scores is also interesting and instructive. For instance, the median scores may provide better representation of the central tendency of the score for each group. The range of scores also provides information that may be useful in further analysis of the data. In order to gain this information from the data, exploratory data analysis techniques were used to identify the median scores for each group and the range of scores within each group. The data from these analyses is presented in Appendix 4.

Limitations of the Procedure

Of the 105 people asked to participate in the study 60 agreed to participate and 24 actually completed all of the assigned tasks. The main reason shared by participants for dropping out of the study was that the tasks were too time-consuming for their already demanding schedules. Several indicated that they had expected a survey- type instrument that would have taken only 15 to 20 minutes to complete. Other reasons were reported by those asked to interview an administrator. These participants were not able to take the time to schedule an interview, conduct the interview and then write a summary. Two indicated that they did not feel comfortable interviewing an administrator. Providing the participants with a transcript of an interview attempted to address this problem by reducing the time required to complete the task. Although the participants receiving the experimental intervention had the highest attrition rate, there was also attrition in the pre-test and post-test groups. The fact that the tasks were difficult for many participants to complete may have impacted the external validity of the study and compromised the ability to make meaningful generalizations about educators in the DoDDS system from the findings.

In other studies that required participants to interview administrators and write a summary (Danzig, 1997), provide a written summary of how they would solve a problem (Leithwood and Steinbach, 1993) and write a narrative of a problem of practice (Quong and Walker, 1999), participants were either enrolled in a class and receiving graduate credit for their efforts, the task was part of a conference they were attending, or the participants were required to complete the task as part of their employment (Leithwood and Steinbach, 1993). The participants in this study were not required to participate and did not receive any compensation for their efforts.

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CHAPTER IV

FINDINGS, CONCLUSIONS AND DISCUSSION

Findings

Tables 1, 2 and 3 below, contain the statistical evidence needed to answer the research questions. Table 1 provides a summary of the mean context, influence and intuition scores for each group on both the pre and post tests. Table 1 also provides information concerning standard deviations. It indicates that Group Two, which had the training/treatment, had the highest mean score of 6.83. Group Three, the group which had no training/treatment, had the lowest mean score of 3.33.

Table 1

Pre and Post Tests Means and Standard Deviations for Study Groups

	Pre-test		Post-test		
Group	Mean	Std*	Mean	Std	N
One			4.66	2.58	6
Two			6.83	4.53	6
Three	3.66	1.86	3.33	2.13	6
Four	4.16	2.92	4.16	2.92	6

* Std Standard Deviation
**The actual data for each group is included in Appendix 4

Table 1 shows that the means for all the groups and treatment conditions, except for Group Two, were within 1 point of each other, 3.66 to 4.66, while the mean for Group Two was 6.83 which is 2.17 points higher than the highest mean of the other groups. The standard deviation reported for these groups shows that Group Two had the highest standard deviation and the Group Three pre-test scores had the lowest standard deviation.

Table 2

Analysis of Variance for Post-Test Scores for the Study Groups

Source	DF	SS	MS	F	P
Pre-test	1	30.37	30.37	3.11	0.092
Treatment	1	18.38	18.38	1.88	0.184
Error	21	204.87	9.76		
Total	23	253.63			

Table 2 summarizes the results of the Analysis of Variance. Table 2 indicates that there was no significant difference on post-test scores between the four groups when compared, based on whether a group received the pre-test or not and whether a group received the treatment or not. The F score of 3.11 and a P of 0.092 indicate that there is no statistical difference in the post-test scores of the groups that received the pre-test and those that did not, Groups Three and Four, compared to Groups One and Two. The F of 1.88 and a P of 0.184 indicate that there is no statistical difference between the post-test scores of the groups receiving the experimental intervention and those that did not, Groups Two and Four, compared to Groups One and Three. The actual data used to compute the ANOVA are reported in Appendix 4.

Table 3

Five Number Summary Data by Experimental Condition and Group

Group	Low Score	25th Percentile	Median	75th Percentile	High Score
1 post-test	2	3	4	6	9
2 post-test	2	2	7	10	13
3 pre-test	1	2	4	5	6
3 post-test	1	1	4	5	6
4 pre-test	1	2	3.5	6	9
4 post-test	1	2	3.5	6	9

Table 3 provides additional data about the distribution of scores useful to exploratory data analysis. Group Two had the highest median score of 7. Group Four had the lowest median score of 3.5. It can also be seen from Table 3 that the range of scores for Group One was 7, Group Two's was 11, Group Three's was 5 for both the pre and post-test and Group Four's was 8 for both the pre and post-test. It may be that because of the low number of participants, an analysis of the median provides a better indication of the effect of the treatment conditions because it is not affected by outliers in the same way the mean is and thereby provides a more robust measure of central tendency (Hartwig and Dearing, 1979; Rodgers, 2003). Therefore, the median may provide a better indication of the actual effect of the treatment. The median of the treatment group that did not receive the pre-test, Group Two, is higher than the median of the treatment group, Group Four, which did receive the pre-test. It appears that the pre-test had a dampening effect on the training for two reasons. One

reason is the median scores of the pre-test groups were the same and the post-test score for the group receiving the training and the pre-test, Group Four, was the same as the pre-test groups. The second reason is the post-test score for the group that did not receive the pre-test was higher than all other groups.

Additional Statistical Analysis

The exploratory data analysis using the medians partially justified further analysis of the data. Several observations were taken into account. First, the F-test used in an ANOVA is a two-tailed test. The predicted direction of change for this study in relation to the intervention is in only one direction. It was decided that multiple group comparisons, using a t-test was justified. Second, the size of the effect expected, as well as what really indicates a difference between scores needed further consideration. The probability of a Type I error, falsely rejecting the status quo, was controlled for in the study, but no attempt was made A Priori to control for a Type II error, failing to identify actual differences. The fact that the study suffered from a low number of participants actually completing the study, six per group, made the likelihood of finding statistical differences less (i.e. low statistical power could be a problem). A Post Hoc Power Analysis was conducted to determine the number of participants needed to detect differences between the groups, using a one-tailed test at a .05 level. The first question was how much different did a score have to be from another to indicate a difference, i.e., what is a meaningful effect size? For example is a score of 4 different from a score of 5? In other words, how did the score given to a solution reflect the qualitative value of the solution? The other consideration was that

there is a limit to the score that any one solution could receive. i.e. the amount of context, influence or intuition that can be referred to in a two page solution is finite.

My assessment, through the use of this scale and considering the theory involved, is that although a score of 3 or 5 would not be considered different from a score of 4, a score of 6 is different and a score of 7 would be clearly different from a score of 4. Thus, any score that differed from another score by around 1.5 units, or especially 2 or more units, would be considered different from the other. An average of the standard deviations was computed from Table 1 for all the groups. The data for all groups was pooled and a standard deviation of 2.95 units was computed. This coincides with a very general and conservative approach using the median of 2.92 from the standard deviations from Table 1. A difference of 2 points on a score represents approximately .677 standard deviations and can be used to represent the effect size for determining if a difference really existed between groups. The effect size in conjunction with alpha was used to strike a balance between making a Type I or Type II error and determine the probability of actually observing an effect of the experimental intervention. If the effect size is known, a table can be used to determine the probability of observing difference for specific group sizes, power of the test, given as specific F, alpha, and degrees of freedom (Cohen,1988). In this case a comparison was made to determine if the treatment had an effect or if the pre-test had an effect. An alpha level of .05 was chosen and the degree of freedom for each test was 21. Although there were only 6 participants per group, there are only two levels of the treatment and pre-test, so two groups are combined for each comparison given an N of 12. From the table on page 311 of Cohen (1988), a group size of 12 for

an effect size of .677 gives a probability of between 81 and 91chance out of a 100 of observing an effect. Finally, since the direction of the treatment effect was predicted to be in one direction, the observed F resulting from a comparison of the pooled scores of Groups Two and Four versus the pooled scores of Groups One and Three was converted to a t score and a one-tail test was conducted, as reflected in Table 4. To determine if the groups receiving the pre-test were different from the groups not receiving the pre-test, the post-test scores for Groups One and Three were compared with the post-test scores of Groups Two and Four. A two tailed F test was used for the comparison of possible pre-test effects, because it was predicted that the pre-test would have no effect on the post-test scores, as reflected in Table 4.

In addition, one other test was conducted. It can be seen from Table 3 that the medians for all the groups except Group Two, are the same, if it is assumed that a difference of a score of 2 is needed for one score to be different from another. It was decided that it would not be inappropriate to conduct a test comparing the post-test scores of Group Two with the post test scores of Groups One, Three and Four combined, as reflected in Table 5.

Table 4

Post-Test Scores Comparison of Groups by Pre-Test and Treatment

The SAS System

The ANOVA Procedure

Class Level Information

Class	Levels	Values
Pre-Test	2	0 1
Treatment	2	0 1

Number of observations	24

The SAS System

The ANOVA Procedure

Dependent Variable: SCORE

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	34.0833333	17.0416667	1.76	0.1973
Error	21	203.8750000	9.7083333		
Corrected Total	23	237.9583333			

R-Square	Coeff Var	Root MSE	SCORE Mean
0.143232	65.02581	3.115820	4.791667

Source	DF	Anova SS	Mean Square	F Value	Pr > F
Pre-Test	1	22.04166667	22.04166667	2.27	0.1468
Treatment	1	12.04166667	12.04166667	1.24	0.2780

The SAS System

The GLM Procedure

Class Level Information

Class	Levels	Values
Pre-Test	2	0 1
Treatment	2	0 1

Number of observations	24

The SAS System

The GLM Procedure

Dependent Variable: SCORE

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	34.0833333	17.0416667	1.76	0.1973
Error	21	203.8750000	9.7083333		
Corrected Total	23	237.9583333			

R-Square	Coeff Var	Root MSE	SCORE Mean
0.143232	65.02581	3.115820	4.791667

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Pre-Test	1	22.04166667	22.04166667	2.27	0.1468
Treatment	1	12.04166667	12.04166667	1.24	0.2780

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Pre-Test	1	22.04166667	22.04166667	2.27	0.1468
Treatment	1	12.04166667	12.04166667	1.24	0.2780

The source Treatment represents the comparison between the post-test scores of Groups Two and Four versus the post-test scores of Groups One and Three. The square root of the F of 1.24 is computed to find the t score associated with it. The t observed is 1.113. Using the table in Hayes (1994), a t of 1.113 with 21 df has a probability of between 0.25 and 0.1, indicating the differences are not significant. It can also be seen from the observed F of 2.27 and a p< .2780 reported in Table 4 that the differences between the post-test scores of the groups that received the pre-test, Groups Three and Four were not significantly different from the groups that did not receive the pre-test, Groups One and Two.

Table 5

Comparison between Post-Test Scores of Group Two versus Groups One, Three and Four Combined

The SAS System

The ANOVA Procedure

Class Level Information

Class	Levels	Values
GROUP	2	1 2

Number of observations	24

The SAS System

The ANOVA Procedure

Dependent Variable: SCORE

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	33.3472222	33.3472222	3.59	0.0715
Error	22	204.6111111	9.3005051		
Corrected Total	23	237.9583333			

R-Square	Coeff Var	Root MSE	SCORE Mean
0.140139	63.64535	3.049673	4.791667

Source	DF	Anova SS	Mean Square	F Value	Pr > F
GROUP	1	33.34722222	33.34722222	3.59	0.0715

The SAS System

The GLM Procedure

Class Level Information		
Class	Levels	Values
GROUP	2	1 2

Number of observations	24

The SAS System

The GLM Procedure

Dependent Variable: SCORE

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	33.3472222	33.3472222	3.59	0.0715
Error	22	204.6111111	9.3005051		
Corrected Total	23	237.9583333			

R-Square	Coeff Var	Root MSE	SCORE Mean
0.140139	63.64535	3.049673	4.791667

Source	DF	Type I SS	Mean Square	F Value	Pr > F
GROUP	1	33.34722222	33.34722222	3.59	0.0715

Source	DF	Type III SS	Mean Square	F Value	Pr > F
GROUP	1	33.34722222	33.34722222	3.59	0.0715

It can be seen from Table 5 that differences between the pre-test scores are not significant at the .05 level. Using a one tailed test for an observed of 1. 895 associated with the F of 3.59 with 22 degrees of freedom is significant between the .025 and .05 level. When Groups One, Three and Four are combined there is statistical significance that can be attributed to the training to identify context, influence and intuition. Although caution should be used in interpreting, these results it does appear that training may have some effect on the explicitness of a solution under certain conditions.

Comparisons were also made between the post-test scores of Group One and Three, the pre-test scores of Group Three and Four, and the post-scores of Group Two and Four. The observed F of .74, P<.4084, F of .12, P<.7314, and F of 1.46, P<.2540 respectively for these comparisons were all statistically insignificant. The observed F of 1.46 from the comparison between Group Two and Four was converted to a t of 1.21 with 11 df and P<0.1 was also insignificant.

Conclusions

- The findings indicate that novice leaders do not differ significantly from each other in the amount of detail they use in describing how they would solve a leadership problem of practice.
- The findings indicate that novice leaders did not modify a previously offered solution after reading an interview with an administrator and reflecting on their use of context, influence and intuition in solving problems of practice.

- The findings of this study indicate that there is no statistical significance difference between the groups that read an interview with an administrator and those groups that did not.
- The only finding even suggestive of a statistically stable difference is the comparison between the group that received the treatment and the post-test, Group two, and all the other groups combined. A finding which should be viewed with caution because of the potential for capitalizing on chance.

The purpose of this study was to determine if there is a relationship between participants' ability to identify and reflect on context, influence, and intuition cues in stories of leadership problems of practice and the amount of detail used to describe the solution of problems of practice. The results of this study, although in the predicted direction, are inconclusive. There is some evidence that the pre-test given to the group that also had the training dampened the effect of the training, thereby confounding the results. The results do, however, show that the trend in the amount of detail given in the solutions was in the direction predicted by the author.

Discussion

The question is why was no difference observed in the group that received the pre-test, the training and the post-test? Did solving the problem before being given an example of the importance of context, influence and intuition in the problem solving process somehow diminish the importance of these cues in the minds of these participants? When participants were informed that there was evidence for a better solution or that more variables should be taken into account, it would be expected that

participants would make changes to their solution in the post-test. This, however, did not happen. An explanation of this may be in what Howard Gardner (1995) calls the unschooled mind. Gardner developed the concept of the unschooled mind to help explain why school is difficult for many children. He postulated that young children construct ideas or theories about how things work very early in life before they start school, thus they are unschooled.

Even though teachers were presented evidence that contradicts these constructs, there is an extreme reluctance to abandon them. The result is an adherence to their personal constructs and a rejection of what is taught in school. The fact that there was no difference between the pre and post-test scores of the group receiving the experimental intervention, Group Four, could be explained using the cognitive construct of the unschooled mind. The participants that solved the problem before receiving the training constructed a solution based on how they perceived reality. In a very real sense they have made a commitment to their solution by writing it down and communicating it with someone else. Anecdotal evidence for this comes from communication with several of the participants who reported they would have submitted their solution earlier, but they wanted to make sure their solution was correct. Like preschool children, they had constructed a solution without reflecting on the function of context, influence and intuition in the problem solving process and, even when given evidence of the importance of these variables, did not change their minds. On the other hand, the participants who had not committed themselves to a solution before receiving the intervention provided more

detail in their solution, a skill that has been demonstrated as important in the transition from novice to expert as a leader (Wagner 1993).

Summary

This exploratory study attempted to determine if there was a relationship between asking participants to identify and reflect on context, influence, and intuition cues in stories of leadership practice and the amount of detail used to describe the problem process. Although the study found links between the CII cues and the explicitness of the solutions, where minimal training was involved, they were not conclusive.

Problems of participant attrition arose during the study and were attributed to the complexity and time-consuming nature of the tasks required of the subjects. This problem provided insight and discussion as to the difficulty of conducting research with a model that requires teachers/trainees to interview building or district administrators. The fact that participants who dropped out of the study citing the time-consuming and complex nature of the study raised important issues of research in educational administration training. The problems encountered in this study raise questions about research models that involve either the reality of interacting with administrators or the process of interacting. The results and limitations of the study suggest several questions.

- Are teachers reluctant to interview administrators as a result of differences in the two positions?
- Are teachers too overworked to participate in educational studies?

- Does research that requires the interaction between teachers and their supervisors need special provisions?
- Are results from studies that use voluntary participants significantly different from studies where participation is mandatory?

Perhaps this study suggests that there may be a type of superficiality in all research involving tasks that require the participants to produce a product and interact with administrators. Perhaps, it explains the popularity and necessity of survey-type, neutral-valence research. Importantly, it may suggest that the alternative selected by this researcher is viable and may be a reasonable substitute, if the limitations encountered in this study can be overcome in future research.

CHAPTER V

DISCUSSION AND RECOMMENDATIONS

Based on this study, several recommendations related to future research and educational leadership is indicated. The first relates to current and future research activity and the second to the training for the practice of leadership.

This exploratory study attempted to determine if there were differences between four groups of educators, using the factors of pre-testing, post-testing and CII training, in terms of explicitness scores given to written responses to a real leadership scenario and a transcribed incident of administrative decision-making. Specifically, no significant differences were found between the four groups. Earlier sections of this document have dealt with the major significance of the study and the learning to glean from it. However, based on this study, several recommendations related to future research and educational administrative practices seem warranted and supportable. The first relates to formal research activity and the second to educational administrative practice, specifically with respect to the training of administrative practice.

Future Research

The concepts of context, influence and intuition in decision-making appear to be valid. They reflect aspects of the decision-making process that are real, though sometimes difficult to describe and discuss. They, additionally, reflect the 'commonsense' that attends or emanates from experience. They represent the things that administrators with experience just 'know'. In many cases, these administrators

would have difficulty articulating it, but they would all, in the same circumstance, just know.

Case studies have been a staple of administrative training programs. In these training activities, trainees have had the opportunity to make decisions about hypothetical situations, using a set of problem-solving paradigms related to process. In many cases, trainees' responses were reviewed by administrators in the roles of trainers. Often, these trainers responded on the basis of their own experience, but these experiences were not discussed within a framework that allowed the trainees to systematically examine the trainer's thinking, or lack thereof in reaching their conclusions.

Generally, this study attempted to determine if four groups of trainees were different, in terms of their explicitness in describing a decision-making process. All four groups were tested for explicitness; two groups were pre-tested, two groups were not. Two groups were provided minimal training to identify context, influence and intuition in an administrative-generated, transcribed and 'real' problem situation. Though as indicated earlier, no significant differences between and among groups were found, the basis for additional and future research appear substantial. First, it is recommended that the study be replicated in DoDDS and involve a larger number of participants. This would essentially verify whether or not this study and its finding represent an outlier. A related research project in DoDDS may well be a separate and similar study that does not require the trainee-initiated interview with the administrator, specifically those in the buildings with the administrators. Such a study would represent the 'default' approach employed by this researcher, in which

the researcher conducted the interview, transcribed it and had the trainees respond to it.

Secondly, the original study should be replicated in a school district or school districts within CONUS (Continental United States), to determine if research models requiring the trainee-administrator interview used is this study are viable there. This raises the fundamental issue as whether or not the DoDDS system or these systems have unique characteristics that do or do not accommodate this model. In a similar vein, additional data for similar future research may be gleaned by attempting to determine if various categories of CONUS school systems are capable of accommodating this model. Such categories might relate to size, location and/or private/public status.

Thirdly the study should be conducted comparing beginning educators, educators with ten to fifteen years experience and educators with over twenty years experience. A comparison of this nature would control for experience as an educator as contributing to the wide range and variability of the scores observed in this study.

Fourthly, the original model and the 'default model' may be used in the same district to determine if patterns of involvement are different and what the basis for any difference might be. This could possibly determine model schools and school districts for training and research purposes.

A fifth recommendation of interest to this researcher involves conducting research with teachers to determine those factors that influence them to become involved in research and the information-gathering techniques that might be

preferable. An important question should be whether or not and why teachers would be involved in a study which required them to interview their building administrators.

Sixth, it is recommended that a study be conducted that investigates the apparent dampening effect of having trainees solve a problem scenario before receiving training to identify context, influence and intuition cues on the amount of detail used to describe a solution to a subsequent problem scenario.

Administrative Practice

One of the major findings of this study is that minimal training in identifying context, influence and intuition in administrative recounting of their decision-making processes may affect the level of explicitness in describing that process, on the part of those trained. This study, then, raises the issue of whether or not it would be possible to supplement current administrative training models by adding the possibility of the 'default' model, perhaps with some slight modifications. Thus, in addition to the mentorships, internships, 'shadowing' and those types of training techniques, there would be the opportunity to broaden the learning with more focused CII activities in order to get into the 'heads' of local or non-local administrators to gain insight into, perhaps, what really influences administrative decision-making. Thus, this writer recommends that such current on-the-job, 'real life', training be supplemented with CII training.

An equally exciting and valid recommendation is that CII and its training dimension become, perhaps, the primary approach to the 'real life' training of educational administrators. It appears to be logistically and organizationally tidy and relatively inexpensive.

This study provides some evidence that supports more and better training in the use of the CII concept and activities. Large school districts, with their 'in house' training structures should become aware of and explore the potential for improved training made possible by CII.

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APPENDICES

Appendix 1

The Problem Scenario and Instructions

A scenario is presented below. Follow the directions given. Your may hand-write or word-process your response. There is no length requirement to your response. Keep in mind that there are no right or wrong responses to the prompts.

As described in the Informed Consent Form:

> *The records of this study will be kept private. In published reports, there will be no information included that will make it possible to identify you as a research participant. Research records will be stored securely in a locked file cabinet in the office of the Principal Investigator. Only the Principal Investigator and his Supervising Professor will have access to the data. To insure confidentiality all information that could lead to the identification of a participant will be removed from all correspondence before any analysis of the participant's responses begins.*

Instructions

1) Read the scenario below.
2) Identify the primary problem(s).
3) Identify secondary problem(s).
4) Provide supporting evidence you used to identify the primary and secondary problem(s).
5) Develop possible solutions or alternative solutions.
6) Evaluate the possible solutions you have developed.
7) Select the solution most likely to solve the problem.
8) Describe how you would implement your solution.
9) Include any additional thoughts or reflections you may have regarding the scenario and the solution you chose.

The Scenario[2]

The Background:

The day is October 23rd, and it's your first day as principal of Southside Middle School. School has been in session for several weeks, and in late August the previous principal (a 15 year veteran in the position) made a last minute decision to retire. His retirement was unexpected, but he agreed to stay on until a replacement was found. The school district needed to post the position and hire a new principal within the guidelines of the district's Department of Human Resources. You applied for the job in early September, and after five rounds of interviews, you were offered and accepted the position at a Board of Education meeting on October 1. You gave notice to your current employer, completed your responsibilities, and prepared to step in as the new principal at Southside Middle School.

The School:

Southside Middle School is located in a rim community of a major American city. Classified as an urban/suburban school, the school houses approximately 1,000 6th, 7th, and 8th graders. The ethnic makeup of the school is 40% African-American, 20% Latino, 30% Caucasian, and 10% Asian. There are two veteran assistant principals, one of whom applied for your job, and 80 faculty members, comprised of an equal mix of veterans and rookies. The school also has a non-certified staff of 30. A strong union represents both faculty and staff; in fact the president of the teacher's union is a faulty member at your building.

Over the last several years, state test scores have continued to decline. The school climate reflects an apathetic attitude of a small number of disengaged faculty who are presently staunch resistors to any school improvement initiative. This small group of faculty has bullied other faculty members into believing that the responsibility for school improvement in terms of climate and academics lies elsewhere. Discipline is an increasing problem. Faculty and staff have determined that sending students to the principal's office is the only course of action.

Day One:

It is 7:30 AM, Monday, October 23rd. You just walked in to the main office at Southside Middle School, where faculty and staff are required to arrive by 8AM, with the 1st class beginning at 8:20.

As the new principal, what will you do from this point forward?

Write you response here.

Save your response in a word document and email to
Joseph.Skorupski@eu.dodea.edu

[2] Scenario present during a Leadership workshop (June 2004) by Dr. Steve Edwards and presented here with the permission of Dr. Edwards.

Instructions for the Experimental Intervention

Conceptual Framework

Problem solving dominates the day-to-day activity of administrators. The focus for preparing new teachers and administrators has traditionally been to teach a problem solving procedure: define the problem, identify possible solutions, chose a solution, implement the solution and evaluate the success of the solution. Recent evidence suggests that although the procedure for problem solving is important it is also important to understand what a person is thinking while engaging in problem solving behavior. Three factors have been identified as being important when thinking about problem solving; context, intuition and influence. You are being asked to determine if an administrator thinks that context, intuition and influence are important considerations when solving problems of practice.

Instructions for the Interview

Contact an administrator who is either an Assistant Principal, Principal, Assistant Superintendent or Superintendent and make an appointment for an interview. Take notes during the interview in order to write a summary. Begin the interview by asking a number of biographical questions including such facts as number years in service and why education was chosen as a profession. These questions are not the focus of the study so do not spend much time in the elaboration of these responses. The main focus of the interview is to discuss a past problem of practice the administrator has dealt with and has solved. Ask the administrator to describe a difficult work-related problem and how he/she solved the problem of practice. To help them identify a problem of practice you can suggest that it could have involved others inside or

outside the school and may include staff, parents, students and/or other administrators. As the interview progresses pay particular attention to: 1. Was the organizational environment or structure such as culture, values, norms, level within the existing hierarchy and/or accepted practices important to the solution of the problem? (Context) 2. Was the solution based on personal knowledge, previous life experience and/or personal constructs such as opinion, worldview and feelings? (Intuition) 3. Did awareness of underlying personal values and beliefs, such as avoiding conflict, job security, supporting diversity, fair treatment of minorities, career advancement and/or a sense of individuality contribute to choosing a solution? (Influence) If the administrator does not mention factors relating to context, intuition and influence while discussing their challenging problem of practice then ask in your own words or read these questions: Was the organizational environment or structure important to the solution of the problem? 2. Was the solution based on personal knowledge, previous life experience and/or personal constructs? 3. Did awareness of underlying personal values and beliefs contribute to choosing a solution? After the interview and using your notes write a brief summary of the interview including:

1. Biographical information.
2. Importance the administrator placed on context, intuition and influence in solving a problem of practice
3. Personal reflections on the importance of these variables in your own practice as an educator.

The summary should not exceed two pages double-spaced 12-point Times New Roman font. Send the summary and any other comments, reflections and/or suggestions to Joseph.Skorupski@edu.dodea.edu as an email attachment titled 'The Interview.' Please do not include any information in the summary that would reveal your identity or the identity of the administrator.

Appendix 2*

Summary of the Interview

Context, Intuition and Influence are important aspects of decision-making. Becoming more of aware of how others and you use context, intuition and influence helps you solve problems in your own practice. Below is an interview with an administrator in which context, intuition and influence is embedded.

Context refers to the organizational environment or structure such as culture, values, norms, place within the hierarchy, accepted practices.

Intuition is a recognition of the importance of personal interpretation and is expressed in opinions, feelings, world view

Influence is an awareness of underlying personal values as contributing to choosing a solution such as avoiding conflict, job security, supporting diversity, fair treatment.

Some examples from this interview are:

Context: "the central office came out because she was an administrator"

"you are talking about in the middle of the Bible belt. So it is not a cultural thing"

Intuition: "the zero tolerance position was not zero tolerance"

Influence: “we did not have a lot of money when I was growing up”

“I was just worried about the students..”

Tell me why you chose education. How did you decide to become an administrator?

I chose education because I think it is very important. My family, we did not have a lot of money when I was growing up. There were 7 children in the family so I thought I could get an education as a way of getting out and making it. And I also found getting a college education was important. I really wanted to coach college football. That’s why I wanted to go to college.

So how did you end up in public school high school?

I went to work in public school because that’s what you normally did. You became a coach in high school and then moved up. So I started coaching and spending a lot of time coaching. I left Texas and moved to North Carolina. My wife said to me one time, you know you’re spending all this time down at school why don’t you just become an administrator and get paid more money for it. I started going to college. I took one course. I was working one summer working on a roof putting shingles on and somebody came around and said they needed an assistant Principal in the town that I lived in and I went around and interviewed and got the job. So next thing I knew one day I was a football coach and the next day I’m assistant Principal and a football coach. I stayed there as Assistant Principal and got my degree and became Principal of that school. It was just a unique way to become an administrator.

How long have you been an administrator?

I worked in the DSO for 4 years and then I taught for 5 years straight. That'd be 9 so it has been 22 years I was either Principal or Assistant Principal.

I am looking at the possible effects of context, intuition and influence in the day-to-day problem solving of school administrators in school leadership. Would you share a problem of practice?

I will tell you a problem I have had, not here. It's going to be a long problem so it takes a while to tell it. I was approached by a couple of teachers who told me that there was a teacher that was drinking and one of the teachers had smelled alcohol. I called him in and questioned him and he said he had not been drinking and I had no reason not to believe him because I couldn't smell anything on him. Then about a month later one of the kids came to me and told me that they felt like he was drinking and that they could smell it on him bad so I called the local police and asked them to bring a breathalyzer and that I wanted to have him tested. So they did and I called him in and asked him if he would take a breathalyzer and he got mad and said no and when he said no real loud he leaned toward me and I could smell alcohol on him. So I said I don't have to give you a breathalyzer because I can smell it on you, I can smell it on you now. So this is what I want you to do. I want you to call someone to pick you up. I don't want you to drive home. I don't want you in your truck because you've been drinking and might harm yourself or harm somebody. I said I will call you and let you know what the situation is. Well I asked one of the Assistant Principals at that time to go with him because I was afraid he wouldn't do it. Well he got away from the Assistant principal and he got in his truck. I already had the deputies set up out on the road and they stopped him and he turned out to be drunk.

He had 2 pints in his car, of vodka, and he had already finished one. This is around 12:30. He had already finished one bottle and had been drinking all morning and because he had already called his wife and his wife had refused to come to pick him up and so he decided he would drive home and they stopped him and arrested him for being under the influence because he had an open container.. At that particular time I had already called the central office to talk to the personnel people and I told them what he is was doing and what I was going to do making them aware and then I talked to the superintendent to make him aware. My main concern was to make sure that he didn't drive and hurt himself or somebody else. Once we found out he was driving they stopped him and gave him an on the street breathalyzer and found the open containers they arrested him and took him to jail. About 3 days later he called me and asked me if he could come in and talk. He came in. Because I had already talked to him about it and tried to help him I told him that it was beyond my control now. My suggestion to the superintendent was that he be released immediately because of a danger to the students because he taught carpentry and all the electrical appliances they used the saws and drills and it scared me because there were huge table saws and dangerous band saws and so he decided, smart on his behalf, that he would resign, so he resigned and I didn't have to go the process of releasing him. It was tough because you are dealing with a sickness. Had he told me upfront I think I could got him some help because the system I was working in was very good about helping people who were having problems and being an alcoholic like that you just have to admit it.But he didn't. In fact after that particular day he never came back on campus.

Did he ever get a teaching job again?

No, he started building houses. He would not have been able to get a certificate; I would have to tell the truth if anyone asked if he had a problem.

Have you ever seen this kind of problem of substance abuse before?

Yes, I believe my first year as a Principal, my Assistant Principal was appointed, I didn't get a chance to pick her and she started drinking. She had some real bad home problems and she started drinking and I had to treat that the very same way. I went to try to get her help and I couldn't get her any help because nobody would believe me that she was an alcoholic and finally people started seeing things that she was doing and we never could find out where she was keeping her bottle during the day. She would come in the morning and do really good and then by the afternoon she was sluggish and her words were slurred and she was not competent. They finally released her, when she finally broke down and said she was drinking. So I had already dealt with that and I didn't have to do anything, there the central office came out because she was an administrator they took over. It was a very similar situation. I didn't want her to drive home; I tried my best to get her not to drive home. Then I have had quite a few incidents with children, students drinking, and you treat them a little different because they are students you know you are going to have to punish them. With adults I hold them responsible for their actions; children are allowed to make mistakes. Drinking on the job is not it is not a good thing to do

Was drinking part of the culture of that community?

No it was not. You are talking about in the middle of the Bible belt. So it is not a cultural thing about drinking on campus. There is a law about alcohol consumption on school grounds so I had to think about and concern myself with that as well as how do I turn him in, turn him in for drinking on school grounds. That was a possibility that was my choice if I wanted to. I was just worried about the students on campus and wanted to make sure I was protecting them.

Has the safety of the students been something that's influenced you most of your career or did it develop over time?

When you first become an administrator you're so inundated with different problems that you kind of have to make a decision about what you think is the most important because you can get hit with 5 or 6 different things at one time so you want to look at the students first are we protecting them. The state of North Carolina passed a lot of laws about guns and weapons and drugs and zero tolerance but you have to be really careful because you want to protect students but you also want the students that you are trying to protect to get some type of education so the zero tolerance position was not zero tolerance it was zero tolerance to a point but if a kid got caught with a certain type of drug they were never kicked out of school even though we had zero tolerance

So it depended on how much the safety of the student and the school itself was in danger by a particular behavior?

Oh yah, for example we had a kid he was lighting trash cans on fire in the bathrooms and we finally caught him. I was very harsh with him because he could have hurt somebody and that's what you have got to look out for. Kids were getting tired of it too. We had to lock the bathrooms and all of a sudden you get kids coming into my

office saying you know so and so is down there lighting trash cans so they wanted it stopped as well

You've dealt with student behavior and discipline a lot over your career; do you think you've developed an approach even before you have collected the facts?

On certain things you have intuition, on certain things you kind of know once you ask the first couple of question you kind of know where to go with it for example if a student comes in here and says they were not talking back but the teacher just sent them down here I know that's not true because I know a teacher does not just pull a name out of hat and send them down. So you have to start questioning and you learn how to question. You learn this through experience. I could not teach you how to do it, you learn through experience how to question a student to get the information you want. You have to be very, very specific if you say the sky is green you had better have something to back it up. If the sky is green you had better be able to say the sky is green because of this, because if you ask a student something they are going to ask you how you know and they are going to say well because this happened. You have got to learn how to question to get all this out of them and then you have got to be able to watch the children to see if they are telling the truth or not. That's kind of what it is about. First of all, having children of your own helps. It is also having the responsibility of trying to help students when they are on the school grounds so you have to question them to the point to where you think it is the truth but you get fooled; a lot are good liars.

At the beginning when you were a novice administrator did you make the same types of decisions then or has it been a learning experience where you have built on experiences?

I think coming into DoDDS is different than the public schools. I think in the public school I had a lot more confidence because I knew the rules because I helped write the rules in two different counties, but coming into DoDDS you have to worry about the military side of it which I feel more comfortable with now after the first year. It kind of mixes in with what we did in the states with school boards so I consider the military to be just like the school board. I have got to try and understand and make sure I am correct because when I present it to them or to a parent or outside the school it had better be correct. I do not want to back up and say I made a mistake so I think that is part of it, you learn how to do that and it is never second nature. Over the past years I think I have become more tolerant. I used to be black and white if you did this you got that but I could see where in certain cases that you had to make a decision that was not on the books anywhere and you always want to err on the side of the student so for example at our school now lets say you commit larceny that is over 250 dollars you are supposed to have suspension and move for expulsion well I might suspend them but I do not know if I would move for expulsion. I think you have to use your judgment for that but in the past I would have followed it right down the line and you are going to do this and this but you learn you get yourself in trouble every once in a while because sometimes you get lazy and you don't interview properly or you don't investigate properly and then you get yourself in a bind so you have got to learn how to interview and investigate those are the two biggest things that an

administrator has to do make sure that you are trying to at least get the truth out. It is difficult to become really good at it.

Are there any other things during your career that have influenced how you have made decisions?

I think you have to understand the culture of where your school is. You have to understand what is going on around the school plus you have to be willing to ask and you have also got to be willing to say you do not know everything. I was at a school one time and we wanted to plant trees and we were deciding what kind of trees to plant and we came up with a certain type of tree and it was my decision as principal to decide where to place the trees. Well I wanted to place them outside the front door where they could set off the entrance to the school. The horticulture teacher at the that time came to me and said you do not want to plant them there because these are going to grow fast and you are going to have leaves all over in front of the building, in the entry way and blowing in the main entrance. I said I had not even thought of that. The problem of that was most of the time the wind blew towards the front door so we had problems keeping the front doors closed so the leaves and stuff would be blowing right in the building so I moved them to the side. I went back to that school 12 years later and those trees are huge and there was a lot of leaves on the ground so you have to learn to listen to the people that know more than what you do and you have to be willing to ask them questions, do you think this is right. You have to especially think when you make a decision about discipline of a student. You have to make sure that you investigate it properly and that you listen carefully and that you don't jump to conclusions before you make a decision. I was trained by a very good principal. He

was very harsh to kids and I sort of am not. I don't scream and yell but he would scream and yell sometimes curse at them and you know just brow beat them but I cannot do that. I ask students to come in and sit down and I ask them what the problem is and we discuss the problem and then I give the punishment with an attitude that it is just the way it is. He wouldn't, he would scream and yell. I decided I did not want to be like that because when I took a kid in there that I did not know what to do for discipline I would be embarrassed when he yelled at them so much but he was such a good principal and parents loved him so much he got away with it. You could not do that today, you have to be very flexible in your talking with parents but there comes a time when I will stand the ground I want every one to be treated as equal as they possibly can but there is an old saying that there is nothing more equal than the unequal treatment of unequals so you have to understand that some students may get treated different than others. Not because of who they are but because of their background, you cannot treat a special ed kid the same as you do a regular ed kid and sometimes you can't treat a freshman like you do a senior so you have to understand that too.

Thank you for you time and sharing your experiences with me. This interview has been very valuable to me.

*Note that several of the statements in this section run together. An attempt was made to transcribe the interview as it was spoken which accounts for the running together of sentences and awkward phrases.

Appendix 3

Informed Consent Statement

You are being asked to volunteer for a research study. Your participation in the study is voluntary and If you decide to participate, you are free to not answer any question or withdraw at any time. This study is being conducted at Lakenheath High School where I am a Mathematics Teacher. As a participant you will not be asked to come to Lakenheath High School to participate. All communication between the researcher and the participants will be through the mail. Please read this form and ask any questions that you may have before agreeing to take part in this study.
I am conducting this research as part of a Doctoral Dissertation with the University of Oklahoma under the supervision of Dr. Charles Butler, Ed.D.

Purpose of the Research Study

This study is designed to determine if training helps Educators be more explicit in how they think about, reflect on and explain the process of solving problems of practice in education.

Procedures

Forty volunteers from a pool of Teachers working for the Department of Defense Dependents Schools will be randomly assigned to 4 groups. Volunteers will be asked to sign a consent form stating that they have chosen to be in the study. If you decide to participate, you are free to not answer any question or withdraw at any time. Your participation in the study will be kept in strict confidence.

If you agree to be in this study, you asked to complete one of the following tasks. A) You may be asked to read one problem scenario and then write a description of your thinking about the problem, your reflections on the problem and offer an explanation of how you would solve the problem. B) You may be asked to read two problem scenarios and then write a description of your thinking about each problem, your reflections on each problem and offer an explanation of how you would solve each problem. C) You may be asked to interview an administrator of your choice and write a brief summary of the interview and read one problem scenario and then write a description of your thinking about the problem, your reflections on the problem and offer an explanation of how you would solve the problem. Or D) You may be asked to interview an administrator of your choice and write a brief summary of the interview, read two problem scenarios and then write a description of your thinking about each problem, your reflections on each problem and offer an explanation of how you would solve each problem. Your time commitment to the study may range from one to four hours depending on the task you are asked to complete.

In order to participate in the study you will be required to sign this consent form, which states that you agree to voluntarily participate in the study. As a volunteer you will also be free to withdraw from the study at any time.

Risks and Benefits of Being in the Study

The study has no risks. Participation in the study is totally voluntary and you may withdraw from the study at any time. Your participation in the study will be kept confidential.

As a participant in the study you will receive a summary of the results when the study is completed.

Appendix 4

Data by Group and Participant

Appendix 4 provides the individual explicitness score for context, influence, intuition and the total of all three components found in the description of the problem and the solution. A total explicit score that represents the sum of points receive for context, influence and intuition in both problem identification and the solution.

Group One Received Post-test Scenario only

Subject Number	Context	Influence	Intuition	Total
1	4	2	3	9
2	1	2	0	3
3	3	0	0	3
4	2	2	2	6
5	2	0	0	2
6	3	2	0	5

Group Two Received the training and the post-test scenario

Subject Number	Context	Influence	Intuition	Total
1	3	0	2	5
2	4	6	3	13
3	2	7	1	10
4	0	2	0	2
5	2	7	0	9
6	1	1	0	2

Group Three Received the pre-test scenario and the post-test scenario

Group Three Pre-test scenario explicitness score

Subject Number	Context	Influence	Intuition	Total
1	2	3	1	6
2	2	1	1	4
3	2	2	1	5
4	0	2	0	2
5	2	1	1	4
6	0	1	0	1

Group Three Post-test explicitness score

Subject Number	Context	Influence	Intuition	Total
1	0	0	1	1
2	2	1	1	4
3	2	1	1	4
4	1	0	0	1
5	2	3	1	6
6	2	2	1	5

Group Four Received the pre-test scenario, training and the post-test scenario

Group Four Pre-test explicitness score

Subject Number	Context	Influence	Intuition	Total
1	1	0	0	1
2	2	0	0	2
3	1	1	1	3
4	2	2	2	6
5	3	3	3	9
6	2	2	0	4

Group Four Post-test explicitness score

Subject Number	Context	Influence	Intuition	Total
1	1	0	0	1
2	2	0	0	2
3	1	1	1	3
4	2	2	2	6
5	3	3	3	9
6	2	2	0	4

Appendix 5
CII FRAME RUBRIC

Context	Refers to and fully acknowledges the importance of organizational environment or structure within which problem is embedded. Identifies more than one aspect of the organization e.g. culture, values, norms, place within hierarchy, accepted practices, etc.	Refers to and partially acknowledges the importance of organizational environment or structure within which problem is embedded. Identifies one aspect of the organization e.g. culture, values, norms, place within hierarchy, accepted practices, etc	Refers to and implies the importance of organizational environment or structure within which problem is embedded. Does not identify any aspect of the organization e.g. culture, values, norms, place within hierarchy, accepted practices, etc	Refers to but attaches no importance to organizational environment or structure within which problem is embedded. Does not identify any aspect of the organization e.g. culture, values, norms, place within hierarchy, accepted practices, etc	Refers only to facts without an reference to organizational environment or structure within which problem is embedded. Does not identify any aspect of the organization e.g. culture, values, norms, place within hierarchy, accepted practices, etc
Influence	Refers to and fully acknowledges the importance of an awareness of underlying personal values, such as avoiding conflict, job security, supporting diversity, fair treatment of minorities, career advancement, individuality, etc in the choice of a solution.	Refers to and partially acknowledges the importance of an awareness of underlying personal values, such as avoiding conflict, job security, supporting diversity, fair treatment of minorities, career advancement, individuality, etc in the choice of a solution.	Refers to and implies the importance of an awareness of underlying personal values, such as avoiding conflict, job security, supporting diversity, fair treatment of minorities, career advancement, individuality, etc in the choice of a solution.	Refers to but attaches no importance to an awareness of underlying personal values, such as avoiding conflict, job security, supporting diversity, fair treatment of minorities, career advancement, individuality, etc in the choice of a solution.	Refers only to facts without any reference to the importance of an awareness of underlying personal values, such as avoiding conflict, job security, supporting diversity, fair treatment of minorities, career advancement, individuality, etc in the choice of a solution.
Intuition	Refers to and fully acknowledges the importance of personal knowledge based on previous life experience and/or world view in the choice of a solution.	Refers to and partially acknowledges the importance of personal knowledge based on previous life experience and/or world view in the choice of a solution.	Refers to and implies the importance of personal knowledge based on previous life experience and/or world view in the choice of a solution.	Refers to but attaches no importance to personal knowledge based on previous life experience and/or world view in the choice of a solution.	Refers only to facts without any reference to personal knowledge based on previous life experience and/or world view in the choice of a solution.