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Infusing Complex Problem-Solving and Systems Thinking in College Leadership Development Programs

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INFUSING COMPLEX PROBLEM-SOLVING AND SYSTEMS THINKING IN COLLEGE

LEADERSHIP DEVELOPMENT PROGRAMS

by

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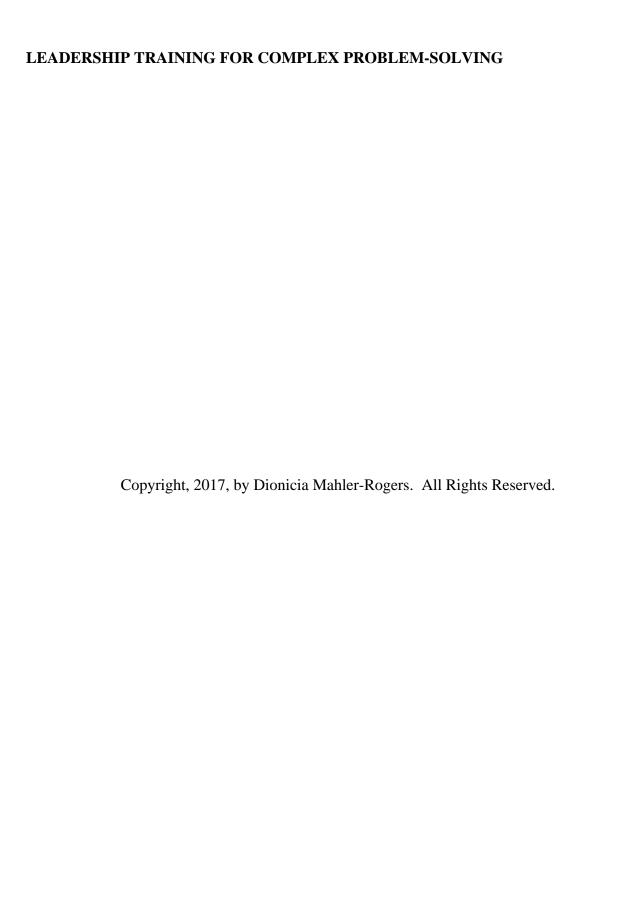
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ABSTRACT

INFUSING COMPLEX PROBLEM-SOLVING AND SYSTEMS THINKING IN COLLEGE

LEADERSHIP DEVELOPMENT PROGRAMS

Present day leaders grapple with a dynamic environment of evolving challenges. Prior leadership studies have afforded revisions of leadership theories in an attempt to remain relevant with the prominently shifting environment. The leadership models that underscore college leadership development programs should reflect the updated theories and practices which expose student leaders to solving complex problems they will experience. This study explores the knowledge, skills, and abilities needed for college students to be able to conceptualize and address system's level leadership challenges. Foremost, the study examined instructional tools and methods that students found impactful for improving conceptualization and achievement of systems-level leadership skills necessary to create desired change.

I utilized a phenomenological research tradition, which examined the teaching techniques, theories, and models utilized for leadership development in a university co-curricular setting. The research process facilitated a depth of understanding of how leadership development training impacts the lived experiences and affects student leaders. The hermeneutic phenomenological design enabled the exploration of similar and differentiating themes among student leaders' experiences (Moustakas, 1964). These themes informed hermeneutic conversations as participants were encouraged to reflect on their experience during the focus groups that were one means of collecting my data (Van Manen, 2011). To uncover a better understanding of this phenomenon, this study examined individual student's practices, and analyzed the responses from fellow students who work alongside the leaders at a large research university located in a metropolitan area of the Southeastern U.S. Since leaders' roles and

behaviors vary and depend on interactions with other students, this qualitative, interpretive

method in a social construct context, seemed a most appropriate way to investigate the

phenomenon of systems level leadership (Hays & Singh, 2012).

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I am indebted to the members of my committee for their critical feedback, time, patience and encouragement throughout the dissertation process. Isaac Newton said, "If I have seen further, it is by standing on the shoulder of giants". The members of my committee truly served as giants allowing me to discover truths around teaching and leadership development by building on their prior discoveries.

My chair Dr. Dana Burnett, has been a source of strength, inspiration, and steadfast model. I am grateful for his mentorship, his enthusiasm to join me in the journey of scholarship, and most importantly his professional life that serves as a beacon of a caring and thought provoking teacher, leader and higher education champion.

The validity of any project rests on its methods, and this project came to existence with the guiding insights of Dr. Tisha Paredes. Her instincts for critical methods shaped this study. Her deliberate questions and extensive experience with focus groups were fundamental to this research project.

Dr. Christopher Glass, your questions during the proposal defense was more meaningful than I could have fully grasp in the moment. Upon further reflection and examination, your questions propelled me to explore the literature and revisit the relevance of all elements involved in teaching. Your discernment was critical in shaping the questions and framework for this study.

I am most grateful for the unwavering love and support of my husband, Francis. Your commitment dwarfs any challenge. Thanks for the constant demonstrations of your support,

belief in my talents, and sacrifices that facilitates my pursuit of happiness. You are a testament

of love.

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CHAPTER I: INTRODUCTION

Leadership is a thriving industry. According to conservative reports, companies spend billions of dollars a year for leadership training of their top executives (Kivland and King, 2015). O'Leonard (2010) estimated that close to a quarter of the $50 billion spent on organization learning in 2009 was spent directly for leadership development. Meta-analysis of prior research related to leadership development training supports the positive impact of these investments (Avolio, Sosik, & Berson, 2009). Reichard and Avolio (2005) pointed out the positive impact of leadership interventions that span less than a day in duration.

Background of the Problem

Universities have been teaching leadership for decades. Today most four-year higher education institutions host student leadership development programs that are intended to develop leadership skills, increase student engagement, and explore the various ways of defining and thinking about leadership (Chambers, 1992). Leadership development occurs increasingly in co-curricular environments of American college campuses. The Council for the Advancement of Standards in Higher Education (CAS) 2009 assessment guide for student leadership programs reported that there were "over 600 campuses teaching leadership courses, creating special leadership centers, and establishing special programs" related to leadership education. This growth in leadership development emphasizes higher education's interests and commitment to leadership education. Utilizing proven teaching methods and tools to provide the right set of skills is essential in developing future leaders and improve existing leadership programs. Bok (2006) asserted the importance of learning that occurs in co-curricular environments. The work of many notable leadership scholars has been used to facilitate and validate leadership developmental programs. Katz' (1955) three-skill approach entailed groupings of technical

skills, human skills, and conceptual skills. According to Katz, the necessary type of leadership

skills needed, coincides with the leader's level within the organization; leaders in top

management positions require conceptual skills, while supervisory levels demand more technical

and human skills. Katz (1955; 1974) and other similar research suggested that the type of

leadership training most appropriate for leaders is dependent upon the level at which they serve

within an organization. Over time, theories have evolved to reflect the dynamic world in which

we live. As Northouse, (2012, p. 12) stated, "The emphasis you give to the various dimensions

of leadership has implications for how you approach the leadership process". A rapidly

changing environment is the new norm for leaders at every level and type of organizations.

The dynamic leadership environment, coupled with the growing knowledge industry,

fast-paced innovative technology, and global competition, require a more decentralize approach

for leadership. Bolman & Deal (2008) described an environment where management is

constantly struggling to keep up with complexity and growing demands accentuated by

technology and social changes. The competencies required of leaders are rapidly expanding as

the complexity of the world increases.   To keep abreast with the pace of global competition and

complexities, we are experiencing more decentralize leadership and even leaderless teams.

Avolio, Walumbwa, and Weber (2009) referred to this as collective, shared or distributed

leadership. Avolio et al. pointed out the similarities with relational leadership and the contrast

with hierarchical leadership. Senge (2006) encourages leaders to find leverage by rewarding

performance not hierarchy, and he pointed to decentralization as an approach to address

complexity. Hackman and Johnson (2013) explained that much of the shifting demands of

leadership requires collaborative leadership, which, in turn, requires systems thinking.

According to Northouse (2012) strategic planning that encompasses the ability to adapt to

changing environments is a conceptual skill essential for leaders. This seems to align with contemporary demands for leaders; however, according to the Katz Model (1974), conceptual skill and strategic planning would be skills tailored in trainings designed for top management. With rapidly evolving challenges, leadership educators ought to prepare students to handle challenges once reserved for top management. This study proposes that the new leadership environment mandates competencies in systems thinking and conceptualizing skills for all leaders.

Adams, Hester, Bradley, Meyers, and Keating (2012) remarked that systems theory provides a path for understanding problems of a multidisciplinary nature. They posited that systems theory enables one to provide explanations and predictability when working with real-world problems. These competencies should be presented and taught in a manner that not only affords executive training to executives, but should be available in trainings that are accessible to all leaders. The environment for systems thinking training and complex problem-solving starts in university trainings available to all students. This study examines systems thinking in student leadership development training as a means to prepare students to work through complex problems.

It is important that we commence early in developing competencies that empower student leaders to address complex challenges. As we develop leadership training models for college students, we are reminded by Kegan (1982) of the importance of leader identity development. Kegan remarked that leaders must first realize that they hold certain assumptions, as they develop and move to more complex ways of knowing. Likewise, Swann et. al (2007) stressed the importance of self-awareness. He believed that we must first understand how identities are shaped and influenced by prior development. This would imply that leaders' prior experiences

and exposure will influence their development and possibly their conceptualization of the systems that influence their behavior.

Leadership trainers also hold assumptions, some supported by the work done decades ago by pioneers and theorists such as Katz (1955), that conceptualization skills are required of higher-level leaders. However, as the structure of leading organizations is changing, so is the need for conceptualizations and systems thinking for middle and entry level individuals. Senge (2006) affirmed that successful enterprises foster capacities to learn at all levels of the organization.

Today's college leadership development programs should equip students with skills for systems thinking and conceptualization; since these skills are not reserved for executives. Leadership educators should provide these skills training and improve their accessible. Most student leadership development programs tend to develop skills required at the individual and group level; yet they fail to address system-level thinking and conceptualization skills. This is likely influenced by the programs' foundational theories which tend to focus on individual level development (Avolio, Reichard, Hannah, Walumbwa, & Chan, 2009). Arensdorf and Andenero (2009) emphasized the importance of experiential learning in leadership development. They concluded that leadership cannot be taught by textbooks alone, but that educators must provide opportunities for practice. Pincus and Rudnick (2013) rationalized that the leadership models and skills of the past are unlikely to result in success today. Students are anticipated future leaders; and leadership training needs to provide them with skills, more complex ways of knowing, and appropriate tools to address complex challenges. Leadership development programs should develop student leaders' capacity to conceptualize themselves in circumstances where they are employing these skills and not reserving such functions for senior leaders.

Problems that leaders encounter today are the result of years of systemic issues percolating in complex environments. To truly generate change, a leader has to understand how an issue intersects with an entire system and structures that sustain a given situation. While leadership development programs are widespread across the nations' colleges, limited number of programs include application of leadership skills which facilitate problem-solving at the systems level (Arensdorf & Andenero, 2009). To provide systems-level skill development entails examining not just the aspects of the problem that impact the individual leader, but seeking to conceptualize the problem in its entirety. Senge (2006) reminds us of the poem of the blind men and the elephant. Which illustrates that by only coming in contact with a single limb, each man believed he was in contact with something other than an elephant. This poem provides a metaphor of bringing all the parts together and painting the full picture to support systemic solutions.

Statement of the Problem

Leadership development programs often address the individual and group level; however, a gap exists for data-driven, researched trainings that enhances students' abilities to conceptualize and address problems at the systems level. Adams and Hester (2012) pointed out that there are many opportunities for errors when facing complex problems; hence, solutions are only as effective as one's ability to diagnose the right problem and deploy the correct solution to the right problem. With practice engaging with systems thinking, students can be better prepared to implement the best solutions to the right problem when they encounter real-world scenarios. Leadership development programs tend to reflect contemporary research and theory, however gaps exist for attainment of these competencies through experiential activities (McEvoy, Hayton, Warnick Mumford, Hanks, and Blahna, 2005). This study, within the co-curricular context,

facilitates the exploration of both the theory and the attainment of required skills by engaging

college students in systems leadership. While prior studies explored results of engaging top

management in systems level training a gap exists in exploring systems level training for college

students.

Purpose of the Study

The purpose of this research project is to understand students' experiences in problem-

solving that results in systems level change. This objective is explored by seeking deeper

explanations and answers to the research questions.

Research Questions

1. What instructional tools or methods do student leaders identify as helpful in preparing them to

   address complex problems?

   a. What knowledge, skills, and abilities best support student leaders' ability to

   conceptualize and address systems-level leadership challenges?

Hypothesis

Student leaders who participates in leadership training explored in this study will be more

likely to conceptualize systems level challenge and will be more likely to shift or permeate the

system construct in an effort to create desired change. Senge (2006) referred to tendencies to

identify solutions that addresses symptoms. This study will explore whether or not engaging in

systems level training results in participants who are more open to explore the problem and avoid

addressing the symptoms.

Importance of the Study

Leadership development programs tend to reflect contemporary research and theory,

however gaps exist for attainment of these competencies through experiential activities

(McEvoy, Hayton, Warnick Mumford, Hanks, and Blahna, 2005). This study, within the co-curricular context, facilitates the exploration of both the theory and the attainment of required skills by engaging in leadership. Individual leadership is generally based on the competencies, skills, and behaviors of each leader; it is operationalized within the individual's sphere of influence. The leadership system is a collective interaction of all leaders at every level of the organization. To create change at the systems level requires individuals, groups, and clusters working on the collective goal. In other words, meaningful change is enacted at the systems level and impacts every individual. Achieving such meaningful resolution requires building an individual's capacities to take actions towards desired change. Senge (2006) referred to this process as a characteristic of learning organizations.

It is important to address levels of data and theory analysis for this study. While leadership theory has evolved over the past 25 years, an analysis of close to 800 manuscripts published in *Leadership Quarterly* reveals that just about one-fifth of the studies used multilevel data analysis techniques (Dionne, Gupta, Sotak, Shirreffs, Serban, Hao, Kim, & Yammarino 2013). Dansereau, Alutto, and Yammarino (1984) addressed the issues for clarity and the dependence between theory and data analysis. Their work formed a bridge between organizational research and leadership research. Comparison of these theories reveals an overlap that is observable in organization levels of analysis and leadership theories and levels of analysis. Dansereau et al. (1984) discussed levels of analysis relevant to leadership theory: persons, dyad, groups, and collectives.

Leadership research was developed from the individual or leader level of analysis, the research was assumed to apply to individuals practicing leadership, as opposed to dyads or teams (Yammarino et al. (2005). This further explains why theory utilized on college campuses tends

to focus on the individual level, or provide leader development focused training, as opposed to developing the capacities of all involved individuals to better work towards a shared goal. Dionne et al. (2013) acknowledged that organizations have become more organic and the boundaries between formal levels and units might be ambiguous; hence unit or individual levels of analysis might not be appropriate.   The theories and practices being implemented on college campus student leadership training programs strongly need an expansion to the collective level. The teaching framework demands an update to support training that addresses the dynamic systems level environments.

        According to Robbins and Judge (2013) organization behavior models consider the individual's input, dynamics with groups and teams, as well as system structure. Viewing leadership development from such a model presents major benefits for leadership programs and the leader's ability to impact change; since leaders and teams are not operating in a vacuum. Such a model would allow practitioners to re-focus necessary outcomes as time changes, yet also allows for the flexibility of important systems that impact the desired change.

Definition of Terms

Change

Planning for manageable and beneficial change and responding appropriately to unexpected external events rather than working to maintain stability have become a business and lifestyle necessity" (Owings & Kaplan, 2012, p. 102).

Change Theory

        Change is synthesized into three stages - unfreezing, moving, and refreezing- to provide a foundation for building a theory. Lewin believed the key to resolve social conflict was to

facilitate planned change through learning and to enable individuals to understand and

restructure their perception of the world around them. (Kurt Lewin, as cited in Owings &

Kaplan, 2012, p. 114).

Fields

Lewin defined a field as "a totality of coexisting facts which are conceived of as mutually

interdependent". According to Lewin, understanding the forces within the field and knowing

which to strengthen or weaken would be the first step to bring about change (Lewin, 1946, p.

240, as cited in Owings & Kaplan, 2012, p. 115).

Inclusive Leadership

One of the basic premises of the social change model of leadership development is that it

is inclusive. The model is inclusive, in that it is designed to enhance the development of

leadership qualities in all participants – those who hold formal leadership positions as well as

those who do not – and to promote a process that is inclusive and actively engage all who wish to

contribute (Education Research Institute, 1996, p 18).

Leadership

Leadership is a social influence process that can occur at individual, dyadic, group,

and/or strategic levels, where it can be shared within a top management team or distributed

throughout an organization. Avolio, B. J., Sosik, J. J., & Berson, Y. (2009) as cited in Avolio et

al. 2009, p. 368).

Leadership

The exertion of influence on organizationally relevant matters by any member of any organization (Katz & Kahn 1978, p. 271-272 as cited in Avolio, B. J., Sosik, J. J., & Berson, Y. (2009), p. 368.

Leadership

Leadership is the art of mobilizing others to want to struggle for shared aspirations (Kouzes & Posner, 2008).

Leaders

Leaders are designers, teachers, and stewards (Senge 2006, p. 321)

Leadership Development

Leadership Development is a multi-level process that facilitates the continual and long-term growth of the knowledge and skills needed to achieve individual, group, or organizational objectives. (Allen & Robert, 2011 as cited in Allen, S. J., Miguel, R. F., & Martin, B.A., 2014).

Learning

Learning is a process of enhancing learner's capacity, individually and collectively, to produce results they truly want to produce (Senge, 2006, p. 365).

Open Systems

The external environment's competition, resources, and political pressures affect the organization's internal functioning.   Organizations are not only affected by the environment but also dependent on them. (Owings & Kaplan, 2012, p. 79)

Mental Models

Deeply ingrained assumptions, generalizations, or images that influence how we understand and act in the world. Frequently operating unconsciously, our mental models affect

our beliefs about what can and cannot be done in life or in organizations. (Senge, 2006 as cited in Owings & Kaplan, 2012, p. 129).

Messes

According to Ackoff, (1974), "the sum of the optimal solution to each component problem taken separately is not an optimal solution to the mess. The behavior of the mess depends more on how the solution to its parts interact than on how they interact independently" (p. 100, as cited in Adams and Hester, 2014 p. 25).

Mindfulness

The process of drawing novel distinctions. (Langer & Moldoveanu, 2000 p. 1, as cited in Figueroa, 2013, p. 116).

Paradox

Paradox is contradictory yet interrelated demands on resources. (Smith, 2014 & Lewis, 2000).

Power

The potential ability to influence behavior, to change the course of events, to overcome resistance, and to get people to do things they would not otherwise do (Pfeffer, 1992, p. 30, as cited in Bolman & Deal, 2008, p. 196).

Systems Thinking

Systems thinking is a holistic conceptual framework by which understanding the whole depends on recognizing the contributions of its individual parts. Businesses and other human enterprises are bound by invisible connection of interrelated actions. Sometimes, it takes years for these links to fully impact each other. Only by thinking holistically of systems, rather than of separate parts, can individuals effectively impact organizational change. (Owings & Kaplan, 2012, p. 129-130).

Systems Thinking

Seeing interrelationships rather than linear cause-effect chains, and seeing processes of changes rather than a snapshot (Senge, 2006).

Organization of the Study

The remainder of the dissertation is organized as follows: Chapter II presents an overview of published literature relating to new directions for leadership, as well as, teacher techniques and tools. Chapter III contains a detailed treatment of the methodological approaches to collecting and analyzing data conforming to the proposed research questions. Chapter IV outlines the results of the data analysis, and concludes the dissertation with detailed presentation of the results and implication for future research and practice.

Research Design

This study utilizes a phenomenological research tradition, which examines the teaching techniques, models and process for leadership development in the co-curricular setting. This research process will facilitate a depth of understanding of how leadership development training impacts the lived experiences and affects student leaders. The phenomenological design enables the exploration of similar and differentiating themes among student leaders' experiences (Moustakas, 1964). To uncover a better understanding of this phenomenon, this study examines individual student's practices, as well as, analyzing the responses from fellow students who work alongside the leaders to solve complex problems on a large research university located in a metropolitan area of the Southeastern U.S. Since leaders' roles and behaviors vary and depend on interactions with other students, this interpretive method in a social construct context, qualitative methods, seems most appropriate (Hays & Singh, 2012).

CHAPTER 2: LITERATURE REVIEW

College Leadership Development Programs

       Higher Education utilizes existing leadership theories and models in developing curriculum and teaching leadership.   The theories and models frame our teaching in higher education, and more importantly, it frames our thinking. Owings and Kaplan (2012) explain that a model or theory guides our understanding and empowers us to engage in behaviors that culminates in success. According to these authors, our ability to explain and predict also facilitates our ability to manipulate specific variables that culminates in favored outcomes. This essence is captured by Bolman and Deal (2008), who specified the need for mental models regardless if we designate them as lenses, filters, or frames. Models helps us make sense of the world. Mental models enable us to quickly relate cues to already existing models in order to make decisions or solve problems. The importance of adding lenses to one's perspective cannot be emphasized more strongly. Bolman and Deal (2008) stressed the importance of adding lenses and broadening personal perspectives. They referred to this process as reframing; similarly, Owings and Kaplan (2012) referred to a schematic model, while Senge (2006) urged reexamination of existing mental models and embracing the practice of systems thinking.

       This research specifically examines student leadership development training, and emphasizes the importance of infusing systems thinking and complex problem-solving. This can be accomplished by encouraging leaders to examine challenges through the lenses of multiple systems, while considering factors most likely to intersect with the perceived existing challenge. As Bertalanffy (1949) indicated, the whole cannot be understood by its parts. Systems thinking requires an understanding of complex interconnections. Without leadership training that provides students with the opportunity to start conceptualizing a new framework, and opportunities to

create new mental models, they are at a disadvantage later when they are challenged to

conceptualize and solve increasingly complex problems. Shaked and Schechter (2013) pointed

out that linear thinking is ineffective in complex environments; instead, systems thinking allows

students to "link decisions to consequences, see the delay in a system, refrain from blaming

external others, and figure out how they contribute to the problem" (p. 778). Providing students

training on systems thinking enhances their ability to recognize patterns and more effectively

identify leverage in proposing solutions (Senge, 2006).

        The practice of leadership is not solely relegated to a unique environment or role.

Opportunities to practice leadership occur continuously throughout one's life. A popular

leadership model used across colleges is the Social Change model developed by the Higher

Education Research Institute (1996). As the name implies, the purpose is to create change, and

the model incorporates values around the individual, groups, and citizenship. This model is very

applicable to this study; since it authorizes students to not only focus on developing self or the

individual, but also to examine individual leaders in the context of groups, and the impact of

their leadership on their environment and fellow citizens. The role of leadership education is to

ensure that students not only understand leadership theory, but that they emerge "doing"

leadership and attain a relevant practice of it (Figueroa, 2013). Critiques of leadership training

programs tend to include the infrequency of real-world practice of doing leadership. In fact, the

skills from some student leader training programs might not transfer to real situations (Baldwin,

Pierce, Joines, & Farouk, 2011; Benjamin & O'Reilly, 2011; Pfeffer & Fong, 2002). Leadership

programs tend to include curriculum built around self-improvement (individual level

development), and working with groups and leading teams (group level development), but fail to

connect the group or team to more meaningful structures and system. Avolio, Sosik, and Berson

(2013) emphasized, that all leaders, regardless of the level they serve, require cognitive, interpersonal and strategic skills. Pincus and Rudnick (2013) reiterated that the leadership models and skills of the past are unlikely to be culminate in success today in the "real world".

Framework for Open Systems

Leadership for tomorrow requires deconstructing systems that many are preconditioned to accept. This requires understanding cultures at play, and structures that have been layered across each other over generations. Problems that leaders encounter today are the result of years of systemic issues in complex environments. To truly create change, a leader has to understand how an issue intersects with multiple systems. Addressing one problem in isolation often triggers other issues (Senge, 2006). As we coach students in leadership training, it is necessary that we consistently expose their framework to the fact that their behaviors are influenced by their system structure. Consistently attempting to conceptualize broader systems enables students to better predict the variables to manipulate in order to yield the preferred outcomes in their increasing complex environments (Senge, 2006). The systems level is often taken for granted that leaders fail to fully assess the paradigm within which they operate. Often components at the systems level are ignored, taken for granted, or conceded as unchangeable (Senge, 2006). The lack of concreteness of the systems level makes it difficult to conceptualize and hence easily ignored. Additionally, individuals tend to revert power and authority to other components of the system itself. Often this type of non-systems thinking advances individuals to feelings of powerlessness, or results in a leader looking outside for someone else to fix the problem, not realizing that lack of individual ownership contributes to the problem. Bolman and Deal (2008) discussed the importance of ethics and politics in organizations. While bureaucracy leads to feelings of powerlessness, individuals can empower themselves by understanding the

political process and ways of asserting self in a positive political light. Often efforts at the

individual and group level can fail to yield appropriate result due to failure to conceptualize and

implement adjustments at the systems level. This encompasses being able to conceptualize the

political framework that impacts the system. Bolman and Deal (2008) clarified that while we

recognize the importance of mental maps, it is as important to realize the impact of expectations.

Bolman and Deal supported the importance of reframing from the four distinct perspectives:

structural, human resource, political, and symbolic.

Senge (2006) captured key systems archetypes in practicing systems thinking: balancing

process with delay, shifting the burden, eroding goals, escalation, success to successful, the

tragedy of the commons, and fixes that fail. These archetypes and frameworks have elements in

common. Senge's (2006) pattern of eroding goals aligns with Bolman and Deal's (2008)

outlined pitfall described as choosing the first good enough option and later shifting aspirations,

instead of seeking the best option from the start.

Owings and Kaplan (2012) encourage systems thinking which they explained as a

"holistic conceptual framework by which understanding the whole depends on recognizing the

contributions of individual parts" (p. 129). This type of thinking creates a mind shift in the

manner by which individuals perceive themselves and their world, and more importantly how

leadership is practiced at all levels. According to Owings and Kaplan (2012), "organizations and

individuals are bound by invisible connections of interrelated actions" (p. 129).   Bringing all the

parts together enables us to better see the system and the not so visible connections. Once we see

the whole system, it is more valuable than the sum of individual parts. More importantly, when

we are conditioned to examine natural connections, this process becomes part of our mental

model as we realize that boundaries tend to be arbitrary.

This research investigates system thinking framework which urges students to consider the systems structure which influences their behaviors. Uncovering patterns and models when approaching challenges enables students to recognize typical errors of non-systems thinking.

Bolman and Deal (2008) provide an appropriate reflection for the system framework.

Reframe, reframe, put a new spin on the mess you're in. Reframe, reframe, try to play a

different game. Reframe, reframe, when you're in a tangle, shoot another angle; look at

things a different way. (p. 41)

This reflection summarizes the process of challenging limiting perspective and encouraging idea sharing.

Building on Existing Theory and Providing Practice

Moving forward with training for our students for tomorrow, does not require that we dismiss all previous work related to leadership. Over the years, we have seen constant updates of theories mirroring new practices. However the challenge is to continuously integrate updated theories into practice as student leader trainings are developed. College students are the anticipated leaders of tomorrow. Regardless of their level or role within an organization, they will require these skills (Allen, Miguel, & Martin, 2014). Recognizing leadership development as a process which entails development on multiple levels (Avolio, 2005; Day, 2001), permits educators to grasp the significance of incorporating critical elements in the academic plan. The elements further facilitate the realization of the outlined outcomes and provide students with improved capacity to influence change. This process facilitates students' full cycle of development which entails the know, see, plan and do model: an appreciation for the cycle of teaching, or knowing and cognitive development, to the learning by seeing the process in action, plan and gain practice in simulation activities and leadership emersion experiences to the final

stage of doing in complex real-world situations (Allen, Miguel, & Martin, 2014). The leadership

development model of McEvoy, Hayton, Warnick, Mumford, Hanks, and Blahna (2005) stresses

the importance of not just learning the theory, but engaging in the application of knowledge

through simulations and mastering the application by immersing in real-world environments.

This concept aligns with Kolb's (1981) experiential learning theory which suggests learning

occurs by going through a cycle of experiences, reflecting on the experiences, thinking of ways

to apply the acquired knowledge, and finally implementing the knowledge into action.

A review of prior leadership research shows a shift in the competency desired from

leaders as different theoretical approaches were developed over the years (Bass, 1990; Bryman,

1992; Gardner, 1990; Hickman, 1998; Rost, 1991 as cited in Northouse, 2004). Northouse

presented a timeline of this shift from trait approach, skills, styles, situational, path-goals, leader-

member exchange, to more recently transformational, adaptive and team leadership theories.

Today much focus is on soft-skills, which have varying lists of competencies; however, the

overarching need indicates a demand for improved social skills. Leadership development

programs tend to reflect contemporary research and theory, however gaps exist for attainment of

these competencies through experiential activities McEvoy et al. (2005). Experiences where

students immerse in the practice of problem solving could enhance their competencies in

assessing problems in their complex environment and identifying the best course of actions

(Ericsson, 2006; Glaser & Chi, 1988).

Teaching Leadership

Arensdorf and Andenero (2009) presented teaching practices that are adequate for the

millennial generation. They emphasize the need for active learning by providing opportunities

for application in real life situations, including both role playing and active observations;

pointing to the work of Dewey (1938) and Bronowski (1973) who emphasize connections

between cognitive response and behavior. These authors consistently recommend that leadership

programs should be guided by theory and research, as well as the opportunity for practice.

Arensdorf and Andenero detailed the types of assignments and experiences that foster leadership

skills, and they detailed the impact of these varied teaching practices. The practices presented by

these authors can promptly be operationalized in a co-curricular leadership program; since rigid

structures accompanied by exams are discouraged.

Figueroa (2013) reported on methods to develop leadership by immersing individuals

into simulation activities designed to teach specific skills by utilizing mindfulness techniques

(Langer 1989) and experiential teaching methods. Figueroa noted that leaders often encounter

conflict within their roles, and they can further practice collaboration skills in real-life situations.

Lattuca and Stark (2009) advised on the key factors to consider for an academic plan.

These factors reflect both students' requirements and the learning objectives. Lattuca and Stark

further charted the critical elements of an academic plan as purpose, content, sequence, learners,

instructional processes, instructional resources, evaluation, and adjustment. These elements

should be consciously decided when reviewing or reassessing leadership development programs.

Based on this guidance, these elements are of interest in this study.

New Directions for Leadership Development

An examination of college leadership development programs and existing leadership

models reveals an apparent disconnect between the complexity of problems students can

anticipate in their futures, and the level of exposure to complex problem-solving within the

leadership development trainings. Caldwell, Dixon, Floyd, Chaudion, Post, and Cheokas (2011)

proposed a leadership model that can be utilize by practitioners that offers a theoretical basis for

understanding leadership dynamics. Their model included popular leadership perspectives, such

as transformational leadership, charismatic leadership, level-5 leadership, servant leadership,

principle-centered leadership, and conventional leadership. These authors directly address

several themes and characteristics of leadership that are more recently respected and desired.

After reviewing and reflecting on the current training models and theories, similar to the

conclusion of Caldwell et al. (2011) a new framework is necessary to enhance leadership

behaviors and competencies to address complex problems.

Operating Within Shifting Paradigms

Increasingly leaders are facing competing interests. A triumph from one perspective is

often realized as a defeat for a competing interest. Leaders operate within paradoxes. Building

on the work of Smith (2014) and Lewis (2000), I define paradox as contradictory yet interrelated

demands on resources. Prior research explored leaders' propensity to lead in a paradoxical

environment. Smith (2014) explored senior leaders' management of strategic paradoxes. Smith

recommended focusing on patterns of decisions as opposed to individual issues, and learning to

embrace inconsistencies. Smith and Tushman (2005) suggested training for paradox by applying

integrative and differentiating practices. Choi, Gerard, and O'Leary (2012) explored the skills

senior executives perceived as necessary for collaborative managers. Their study showed value

for individual attributes such as open-mindedness, patience, change orientation, flexibility,

interpersonal skill, group process skills, strategic leadership skills, and technical expertise.

Collaboration enacts a key function in leading paradoxes. Paradox involving competing interests

are akin to complex problems or Ackoff's (1974) messes with competing constituencies.

According to Ackoff, "the sum of the optimal solution to each component problem taken

separately is not an optimal solution to the mess. The behavior of the mess depends more on

how the solution to its parts interact than on how they interact independently of each other" (p. 5).

This leads to Adams and Hester's (2014) approach to solving messes. This duo believed that messes exists at the intersections of varying perspectives and constituencies, and resolving such problems require both "hard (technical factors) and soft (human factors) perspectives". This team proposed an approach that further explores the problem or mess by implementing a systems thinking methodology facilitated by seeking answers to the series of who, what, why, where, how, and when questions. These questions amass responses and enlightenment about the stakeholders, outputs and outcomes, motivations, context, mechanisms to gather further information, and finally, if and when an intervention should be applied. Adams and Hester (2014) believed that in seeking greater understanding, we can then best apply resources. This study explores how students apply systems thinking strategies in addressing problems. As Adams and Hester (2014) indicated, knowledge, skills and abilities play a strong part in moving towards the desired solution.

Skills Needed for Leadership Challenges

There are commonalities in the recently outlined list of skills required for leadership and those required for systems thinking. Pincus and Rudnick (2013) emphasized that leadership development programs should include the development of soft-skills. They pointed to an executive survey conducted by Spencer-Stuart, (2007) which concluded that leaders need more interpersonal skills. Pincus and Rudnick (2013) also included research conducted at Harvard on rethinking the Masters of Business Administration degree, which indicated that leadership requirements are shifting. According to Pincus and Rudnick (2013) there is greater need for empathy-centered leadership. Pincus and Rudnick urged the development of leadership skills

that facilitates partnership as opposed to competition. He noted that emotional and social

intelligence is as important as knowledge of finance and marketing. Bolman and Deal (2008)

discussed highs and lows in personal and business setting which tend to stem from relationships.

They too emphasized the importance of interpersonal skills. This shift to new competencies

coincides with shifting demands of society. These authors also pointed out that more research is

needed in how to teach and foster the development of these emerging competencies. Pincus and

Rudnick reviewed examples of how this could be done in the classroom; this study will utilize

these practices to further explore co-curricular student leadership programs. Üzeyir and Serap,

(2013) provided a summary of skills required for leadership based on research over decades.

These skills vary over the years, from dominance and persuasion to empathy and emotional

balance. As leadership theory has changed over the years, so have the set of necessary

leadership skills.   This study will explore specific knowledge, skills, and abilities that have been

found useful in more recent theories and recommended for systems thinking (Senge, 2006).

Skills for Systems Thinking

Shaked and Schechter (2013) included a list of necessary skills for system thinking.

They referred to the research of Richmond (2000) who listed these as "dynamic thinking-

looking at problems as results of pattern of behaviors, systems-as cause thinking- placing

responsibility on the individuals involved in the policy oversight, and forest thinking-

understanding context and interconnections" (p. 775). Moti Frank (2010) also reviewed a list of

characteristics for systems thinking. Frank's list includes cognitive characteristics that leads to

understanding the whole and interconnections, analyzing capabilities, individual traits, and

background knowledge of multidimensional or multidisciplinary nature, and the ability to assess

significance or a leverage point. He cautioned that it would be unlikely for an individual to

possess all the desired characteristics, and suggests that it is the combination of characteristics

that proves most beneficial for systems thinking. Similar to Senge's archetypes, or Adams and

Hester's (2012) systems errors, Shaked and Schechter (2013) pointed to the ability to see hidden

patterns of issues that should be addressed. Prior research has found links to leaders' success

and strategic thinking skills, which they identified as reframing, reflection and systems thinking

(Shaked & Schechter, 2013). Senge (2006) outlined the laws of systems thinking, which includes

similar behaviors. Carol Zulauf (2007) reviewed over 120 journals and concluded that systems

thinking can be learned. Some tools and methods of teaching systems thinking includes

hypermedia, metaphors, systems thinking modelling, and case studies (Shaked & Schechter,

2013). With the overlap in behaviors around system thinking, this prior research will inform this

study on systems thinking skills, behavior and methods for teaching.

Soft Skills

According the Marques (2012), while some hard skills are desirable for leaders, soft

skills are increasingly ranked just as highly desirable. Recent studies (Marques, 2012) indicated

an escalating demand for individuals with soft-skills, and a shift from tough skills demanded in

previous years. Soft skills are detailed as self-awareness, self-regulation, motivation, empathy,

and social skills. Often, leaders who place a premium on smartness, intelligence, and rationale,

tend to disregard soft skill (Maques, 2012). Yet, business schools have been found lagging in

response to this shifting demand. The challenge seems to correlate with the level of respect for

soft skills as opposed to hard skills typically attained in traditional management courses. Lord,

De Vader, and Alliger (1986) found that trait is highly correlated with leadership perception.

Judge, Bono, Ilies and Werner (2000) found extraversion, conscientiousness, and openness to

experiences to be most highly associated with leadership. These skills and traits tend to

facilitate the social aspects connected with collaboration and the ability to look at existing

challenges while exploring new models that might generate successful systems solution (Senge,

2006). Senge emphasized the need for leaders to engage in dialogue, while Laszlo (2012)

emphasized the importance of facilitating dialogue and building community.

Collaboration Skills

Collaboration directly associates with the skills required for systems thinking; since the

nature of systems thinking requires pulling all the parts together, seeing, and understanding the

whole system. Systems thinking demands that leaders examine how solutions might impact all

constituencies and minimize negative impact (Senge 2006). This requires collaboration. O'leary,

Gerard, and Chol, (2012) examined the practice of executives who successfully collaborated.

While organizations tend to be credited with collaboration efforts, much of the collaboration

remains dependent on individual relationships. O'leary, Gerard, and Chol, (2012) provided an

extensive lists of skill-sets needed for successful collaboration. These collaborative skills

embrace individual attributes, communication, group process skill, conflict management,

sharing, strategic leadership, and substantive technical knowledge. Senge (2006) emphasized the

benefits of technology in facilitating collaborative learning. Often technology enable us to meet

or contribute to a project regardless of the fact that we may not be in the same room at the same

time; hence enabling benefits once reserved for face to face interactions.

Social and Emotional Intelligence

Goleman and Boyatzis (2008) in their book *Social Intelligence and The Biology of*

Leadership, used the study of neurobiology to explain how the mood of a leader can be

contagious in an organization. Positive behaviors such as empathy can help to create

connections between leader and follower which lead to productivity. Goleman and Boyatzis

assessed specific examples of executives who have strong discipline, drive and intellect, but lack

social intelligence. These individuals tend to yield less than favorable results. The science of

Spindle cells explains intuition that guides many leaders' intuitive behaviors. This might explain

why certain social behaviors are mirrored, and followers gravitate to leaders with savvy social

skills. Goleman and Boyatzis also hypothesize that natural selection has been at work for

thousands of years to not only select for physical characteristics most likely to support the

survival of our species, but also selecting leadership characteristics that correlated most strongly

with effective leadership.

Goleman (2009) used social neuroscience to describe how personal connections lead to

desirable results. People's emotional centers influence each other and can have positive or

negative effects. His research showed the need for leaders to encourage warmth and trust.

Goleman explained that effective leadership programs "teach students essential personal skills:

self-awareness, stress and anger management, empathy, strategies for working out disagreements

constructively, and decision making" (p. 80). Having some science to support human behavior

appeals to a logical understanding of behavior. Social and emotional intelligence aligns with the

increasing demands for soft-skills or systems thinking skills (Senge, 2006).

Reflection

"Experience is the best teacher is only true if you reflect on it and extract its lessons"

(Bolman and Deal, 2008, p. 12). Accordingly, Bolman and Deal would agree with Senge (2006)

who calls for the learning organization, as well as, Pang and Pisapia (2012) who stressed a key

systems thinking skill such as reflection. Kolb (1981) indicated the importance of reflection in

learning or attaining new skills. He concluded that individuals attain new information by doing

or experiencing something or via abstract conceptualization. This information is then processed

via reflection or experimentation (Komives, Lucas, McMahon, 2007). While several knowledge,

skills and abilities are reported to be relevant, this study will explore how student leaders go

about solving complex problems, probe the skills they engage, and examine the process that

leads to t desired results. Specifically this study looks at a series of co-curricular workshops

offered as part of a leadership development program that included sessions on collaboration,

trust, emotional intelligence, inclusion and systems thinking and explore students' perception of

their ability to address problems. The prior research reviewed in this chapter influences this

study.

Leadership development programs often address the individual and group level; however,

a gap exists for data-driven, researched trainings that enhances students' abilities to

conceptualize and address systems challenges. With practice engaging in systems training

students can be better prepared to implement best solutions to the right problem when they

encounter real-world scenarios. Leadership development programs tend to reflect contemporary

research and theory, however gaps exist for attainment of these competencies through

experiential activities (McEvoy, Hayton, Warnick Mumford, Hanks, and Blahna, 2005). This

study, within the co-curricular context, facilitates the exploration of both the theory and the

attainment of required skills by engaging in systems leadership. While prior studies explored

results of engaging top management in systems level training a gap exists in exploring systems

level training for college students. This study explores whether or not engaging in systems level

training results in participants who are more open to explore systemic solutions and avoid

addressing mere symptoms.

CHAPTER III: METHODOLOGY

Research Design

This study utilized a phenomenological research methodology, which examined knowledge, skills, and abilities that enable a student leader to effectively conceptualize a problem, and recognize and identify patterns and factors that could result as a byproduct of the solution. Next, this study explored effective instructional tools and possible modifications to current teaching methods that would enhance student capacity to address complex problems. This phenomenological study aspires to answer the key research question. What instructional tools or methods do student leaders identify as helpful in preparing them to address complex problems?

At the outset of this study, it was assumed that leaders who participate in co-curricular training might invest more time in activities at systems levels. Kivland and King (2015) pointed out that corporate leadership training often does not address levels of complexities needed for leaders to be able to induce measurable change. This research process was designed to facilitate a depth of understanding of how leadership development training for complex problem-solving impacts the lived experiences and affects student leaders in addressing complex challenges. The hermeneutic phenomenological design enabled the exploration of similar and differentiating themes among student leaders' experiences (Moustakas, 1964). To uncover a better understanding of this phenomenon, this study examined individual student's practices, as well as analyzed the responses from fellow students who work alongside the student leaders at a large research university located in a metropolitan area of the Southeastern US. Since leaders' roles and behaviors vary and depend on interactions with other students, this qualitative, interpretive method, in a social constructivist context, seemed most appropriate (Hays & Singh, 2012). This

study entailed reviewing and analyzing the phenomenon of student participants working

alongside each other to develop solutions; while gaining a greater understanding of the essence

of their experience.   According to Patton (2002), the focus on the essence of the leadership

experience together is best undertaken as a phenomenological study. This study, that examined a

type of transformation of student leaders, as a result of training workshops, was best conducted

via phenomenology. Patton (2002) stated "qualitative methods are more appropriate for

capturing evolutionary and transformational developmental dynamics" (p. 168).

Senge (2006) referred to the blunders of identifying solutions that address symptoms,

while Adams and Hester (2014) referred to the importance of identifying the right solution for

the right problem. This phenomenological study allows the exploration of the leadership

experiences in solving problems at the college level and affords a foundation for possible future

exploration. The desired solutions in the study addressed fundamental issues as opposed to

symptoms or narrow frames of a complex-problem which created a distraction or worsen the

situation.

Data Selection and Entrée

This experience in the university setting, and the literature review presented above

influenced this study. Prior knowledge and the peer-reviewed literature were employed to

explore and interpret themes of interests. The intent was to implement results of this study to

adjust student development training on the college campus. From previous experience

facilitating leadership programs, it has become apparent that the models utilized and sessions

facilitated permit students to focus on development at the individual level; however not much

was offered towards guidance and practice in systems thinking and problem-solving towards

meaningful change. While these foundational leadership skills are essential, this study sets out to

examine systems thinking training in the university setting. Specifically, this study explored

systems thinking, and examine the application of systems thinking skills in resolving problems.

Population

To be included as a participant in this study, a student leader would have been involved

in leadership develop programs in the co-curricular setting. During spring (2016) the leaders in

this study participated in a non-credit leadership development program. The program consisted

of a series of one-hour leadership workshops offered during the semester. One of these sessions

focused on problem-solving using systems thinking facilitated by a faculty member who teaches

systems thinking on the university campus. Another session focused on collaboration, a key

skill in systems thinking. The students who participated in the systems thinking or collaboration

workshops were recruited to participate in a focus group.

The need for participants in the co-curricular workshops and this study were advertised

using the university announcements and the leaders' communication portal known as orgsync.

To ensure confidentiality for all participants' pseudo names were assigned to each individual.

After second and third data points were matched, original identifiers were scrubbed from the

data. Focus group reporting were aggregated to further remove any possibility of identifying

specific individuals.

Instrumentation

The training modules were developed by a faculty member who teaches systems

thinking, and a faculty member who teaches collaboration. The sessions were video recorded

for later review and analysis. Phillips, Phillips and Ray (2012) discussed the importance of

recordings not interfering with the phenomenon being explored. Since all sessions are routinely

recorded, and students typically attend multiple sessions for the semester, the recording of these sessions seemed as a normal occurrence. Students were most likely accustomed to the technology and camera in the room during the sessions.

The teaching techniques and students' behavior were reviewed for cues and patterns. The students who participated in the workshops were invited to participate in a focus group to further explore their thinking patterns and approach to problem-solving and creating change. Hays and Singh (2012) stressed the relevance of focus group in the educational setting. They reported on the success of focus groups in exploring interventions and phenomenon. Since this study explored the process of problem-solving among leaders, the interactive nature of focus group was ideal to examine the interpersonal interactions. Reviewers looked for patterns consistent with strategic thinking skills (Shaked & Schechter, 2013), soft skills (Marques, 2012), systems thinking practice (Shaked & Schechter, 2013), as well as a deeper understanding of students views of meaningful skill and methods in teaching and problem-solving.

Data Collection

The first unobtrusive data collection method involved reviewing all responses captured during the training. This entailed reviewing both individual comments and behaviors and well as the facilitators' style and tools utilized. Often the nuances or implied meaning of a program cannot be clearly conveyed without direct involvement with a program (Patton, 2002). My presence in the room as an observer, as well as the ability to review a video recording of the session was critical for data collection. Both visual and audio were analyzed and coded. Upon completion of a workshop, student participants completed an online assessment. These assessments were coded and analyzed.

The next data collection built on information captured during the leadership training. Following the final workshop for the semester, focus groups further explored problem-solving strategies and the overall impact of the training series. Patton (2002) outlined some key guidelines for focus groups including limiting the number of questions and having skilled facilitators. Focus group questions were crafted and grouped based on relevance to subtopics. This process enabled a deep understanding by posing limited number of questions focused on a specific areas. A diverse group of six facilitators were trained to ensure competent facilitation for all sessions. The focus group constituted another data point and a way to triangulate information received about the individual's behaviors and thinking by asking direct questions about behaviors and decisions. This study included two 60 to 90 minutes focus groups with about 10 students and two facilitators per session. The focus groups were digitally recorded for audio analysis. The researchers followed Miles and Huberman (1994) guideline for constructing a contact summary sheet after each data collection.

Kegan emphasized the importance of students' level of development to inform their experiences. With this in mind, Lahey, Souvaine, Kegan, Goodman & Felix (2011) provided guidelines for subject-object interviews. Kegan et al. stated that as an interviewer, we answer the question "from where in the involution of subject-object relations does the person seem to be constructing reality?" (p. 7). Utilizing their guidelines provided insights on not only how student conceptualize and address system-level challenges, but also how the process is influenced by their meaning-making structures and even prior exposure to leadership experiences.

The request to participate in the focus group was initially expressed in person at the end of the training series. This was followed by an email and a reminder telephone call. The leaders

who agreed to join a focus group, participated in one of two groups. After a brief greeting, the

participants were briefed on the focus group process, the consent forms were presented and

signed, followed by gaining permission to record the interview. Afterward, a detailed transcript

of the interviews was made available for each participant to review. Denzin and Lincoln (2013)

suggested guidelines for ethical treatment of subjects such as obtaining informed consent,

privacy issues, and general concern for respect of participants and beneficence. With

participant's respect and privacy in mind, data are represented in the aggregate to help protect the

identity of individuals. The data from individual workshop assessments, combined with the

focus groups, and the video recording of the training sessions presented a comprehensive

understanding of the phenomenon. Hays and Singh (2012) reported that two methods could

result in very different data. Similarities and differences across methods were compared. While

the focus group protocol served as a guide, the semi-structured format allowed for more pointed

questions and for participants to provide details. Detailed questions are outlined in the focus

group protocol in Appendix B: Moderator Guide.

Researcher's Reflection and Bias

This tradition which includes Moustakas's Modification (1994) entails the process of

bracketing the researcher's bias. This seems most appropriate considering the researcher's role

in the campus student leadership program. Max van Manen (2011) encouraged researchers

undertaking a hermeneutic study to reflect and bracket assumptions and pre-understandings.

The Council for the Advancement of Standards (CAS) outlined recommended content for

student leadership programs including systems competencies and the "methods of systemic

change" (CAS, 2009 p. 8). The *Handbook for Student Leadership Programs* (2006) also outlines

the scope of comprehensive leadership programs to contain a systemic focus. Kivland and King

(2015) asserted that leaders are not being exposed to consistently sophisticated level of training that would facilitate measurable change. Based on the researcher's experience, student leaders are not demonstrating complex problems solving skills that address systems level. The researcher's role on campus presents a unique opportunity to further examine this phenomenon and conduct research to potentially improve trainings and student leaders' experiences. Patton (2002) noted that applied qualitative researchers who tend to be familiar to the issue being studied, are able to use their experiences and understanding in recommendations. A reflection of the researcher's position exposed perceptions of factors that might be deemed important for complex problem-solving. These factors are related to openness, questioning, flexibility, and political savvy. I believe that training related to conflict management broadens students' openness to explore possible solutions, and system thinking enhance students' ability to identify key factors that could disrupt their goals. Being exposed to the series of training could enhance leaders' ability to preempt a problem and approach solutions that consider challenges across competing systems.

As is appropriate for bracketing in the phenomenological tradition (Hays & Singh, 2012), I have reflected and outlined my position and assumptions related to the student leaders' approach to problem-solving. It is assumed that all leaders desire success; however, success is ultimately defined by the individual leader. Hence our standard of success is shaped by our values which are in turn influenced by our cultural perspectives. Conducting this research on a campus with student leaders representing diverse cultural backgrounds influenced the results of this study. Data point on students' gender and national origin are collected and incorporated in this study.

Data Analysis

Data sources included information collected from students who participated in the Leadership Lecture Series during the semester at a comprehensive research institution. Participants' data were reviewed and grouped by demographics including gender.   The second and third data sources were selected from the sample of participants who made up the first data source.

Data was analyzed based on Moustakas's (1994) modification-horizontalization or identifying non-repetitive statements; textual description or grouping data into categories base on the meaning of experience; and structural description or identifying multiple potential meaning and depth from textual description. This process was utilized for both unobtrusive data and data from participants' focus groups. Open coding allowed for additional codes and themes to be added with new rounds or review. Each participants' response was read and reread for better understanding and meaning of individual experiences relevant to this study. Data was grouped by categories base on system thinking. Next, data was reduced based on relevance to the phenomenon. Categories were color coded to allow for groupings and clustering of data in ways that might not be readily apparent. This allowed for pattern interpretation based on colors. Van Manen (2011) claimed that once a phenomenological study employs an interpretive method it becomes hermeneutic. The next step allowed for the textual and structural description, by grouping non-repetitive statements that were significant to this study, we gained a natural structure that represented researchers' interest of leadership knowledge, skills, abilities, and teaching methods that enable problem-solving. Finally, I reflected on the behaviors of student leaders who participated in the systems thinking training and student who did not participate in systems thinking training, and connection to the research question of leadership skills needed to address complex problems across systems, as well as the instructional tools to assess in this

process. Hays and Singh (2012) both emphasized the importance understanding the participants

lived experiences in a phenomenological study. Gelven (1989) provided an applicable definition

of hermeneutic phenomenology:

> An analysis by which the meaning of the various ways in which we exist can be
>
> translated from the vague language of everyday existence into the understandable
>
> and explicit language of ontology without destroying the way in which these
>
> meanings manifest themselves to us in everyday lives. (p. 6)

The data analysis process enabled the researcher to gain deep meaning of the lived

experiences of the interactions between students while they attempted to problem solve at the

systems level. As Gelven advised, the goal of this study is to stay true to the lived experiences as

leaders attempt to problem solve. This process entailed peeling back the layers and gaining an

understanding of student leaders' values and motivation that might influence their experience

and interactions with each other.

Trustworthiness

This study included multiple data sources which added insight; and triangulation of the

data improved the overall validity and trustworthiness of the study (Hays & Singh, 2012). For

instance, all responses were recorded and reviewed, participants do not see recording; however,

the second data source served to corroborate behaviors observed in the video recorded trainings.

The second data collection scheduled so timely to the initial data collection enabled the

experience to be memorable. Participants added insight and revealed similar practices or themes

as reveal in the initial data.   The timeliness of the data collections improved the credibility of

this study.

Limitations

A reflective journal increased awareness of hidden views and perceptions; while peer debriefing assisted in achieving themes while minimizing bias. Review and feedback from student leaders in different roles on campus can add insight to this research. Further exploration of knowledge, skills, and abilities gained from previous leadership roles can infuse insight to the existing leadership development program. Observations and focus groups with willing participants were helpful in achieving a thick description of the lived experiences and approaches to leadership challenges. Van Manen (2011) encouraged conversation in hermeneutic interviews to keep the meaning of the phenomenon open. A further study utilizing a different data collection and analysis methods could be beneficial in addressing any gaps in this study.

To ensure confidentiality for all students who participated in this study, names were not reported. Second and third data points were matched and original identifiers scrubbed from the data. Focus group reporting was aggregated to further remove any possibility of identifying specific individuals.

CHAPTER IV: RESULTS

Review of Study

The goal of the research project was to understand students' experiences in problem-solving that results in meaningful change. This objective was explored by seeking deeper explanations and answers to the research questions.

Research Questions

1. What instructional tools or methods do student leaders identify as helpful in preparing them to address complex problems?

   a. What knowledge, skills, and abilities best support student leaders' ability to conceptualize and address systems-level leadership challenges?

This qualitative study utilized Moustakas's (1994) modification-horizontalization, identifying non-repetitive statements; textual description or grouping data into categories based on the meaning of experience; and structural description or identifying multiple potential meaning and depth from textual description seemed most appropriate in exploring this phenomenon. This method was used for multiple sources of data, including observation of training video and focus groups. Several rounds of analysis based on multiple data sources enabled data triangulation and deeper understanding of the phenomenon from different angles. The results revealed themes supporting both questions. First we review elements of the academic plan that impact the overall effectiveness of the leadership program, then the results focus on the tools and techniques most impactful in teaching leadership. The second part of this chapter reveals the themes related to knowledge, skills and abilities students identify as supportive of their ability to conceptualize and address systems-level leadership challenges.

Leadership Workshop's Academic Plan

Lattuca and Stark (2009) advised that the key points to include in an academic plan are students' needs and the learning objectives. Lattuca and Stark outlined critical elements that should be consciously considered. These elements consist of purpose, content, sequence, learners, instructional processes, instructional resources, evaluation, and adjustment.

Program Purpose. The workshops central to this study was incorporated in the co-curricular leadership development program of a large research university located in a metropolitan area of the Southeastern U.S. The stated purpose of the leadership development program was:

> To foster exploration and refinement of leadership abilities and preparation to become active citizens in the world. Participation in these programs offers students involvement in campus activities and empowers them to be successful in the roles they assume. Students should strive for continuous life-long learning and leadership development. The division's goal is to develop intentional programs across campus that foster meaningful connections, challenges, and growth (institution's website).

The leadership development program utilized the Social Change Model developed by the Higher Education Research Institute (1996). As the name implied, the purpose is to create change, and the model entailed exploring values around the individual, groups, and citizenship.

Content and Sequence. With any leadership education program, there is the challenge of time and the quantity and scope of material to cover. The leadership program utilized the social change model, and each lecture within the series has specific learning objectives. The specific content is developed by the faculty with the guideline of desired topic area and the details of social change model which connects the entire workshop series.

The sequence and topic areas were scheduled by the leadership program director. All

sessions were offered on Wednesdays at noon in the student union, and the room location was

consistent throughout the semester, for details on sessions see Table 1: Sessions and participants.

The spring 2016 leadership workshop series encompassed eight sessions. The sessions range

from basic or standalone content which focused on individual skill-set, to more complex topics

that further skill development entailed with working with others and creating desired social

change. The session offerings in this study suggest earlier sessions serve as a scaffolding to spur

further growth in sessions offered subsequently in the semester. At times, facilitators' schedules

did not allow for ideal sequencing, but overall the sessions were scheduled months in advance to

allow the best sequencing patterns. The facilitators approached sessions from the assumption

that participants have limited prior exposure to the topic, and all pertinent content were covered

during the individual session.

Diverse Group of Learners. Workshop facilitators encountered a broad spectrum of

students with varying majors and experiences. Some students held professional jobs with

leadership roles within their scope of responsibilities, while others' behaviors were informed by

their roles and responsibilities stemming from involvement in student organizations on campus.

Participants generally appeared genuinely interested in the topics and eagerly participated. The

participants' backgrounds varied widely. Some participants were undergraduate students with no

professional work experiences; while others were graduate students with extensive work

experiences. It would be misguided not to mention the challenges around providing training for

such diverse group of learners who participated in the leadership workshop series.

Instructional Processes and Instructional Resources. The instructional processes were

decided by the individual faculty or facilitator; who were provided a link to view video recorded

sessions from prior semesters. This served to familiarize facilitators with the potential audience,

the program format and prior content. Typically, facilitators use a combination of PowerPoint

presentations, small group activity or simulations, small groups presenting details of their

interactions and ideas to the entire group, large group interactions, and questions and answers.

The setting is typically a large room in the student union with students seating in groups

of approximately six at round tables. Activities are typically done at tables or in small groups

facilitated by topic on flip charts posted around the room. Students typically arrived prior to the

start time and plated their food from a buffet provide. All sessions were video recorded and

students who were not able to be physically present in the room were able to view the live

streaming and participate in online chats.

Additional campus resources contribute to the program. Leadership workshops were

publicized using the school's email announcement system, posters around campus and the

school's involvement communication portal, Orgsync, which provided students with information

on co-curricular events. Publicity material included session titles, descriptions, facilitators'

biographical information, learning outcomes, and dates. Most of the participants completed

online registration for each workshop and they all received reminder emails the week prior to the

sessions. The details above cover the critical elements to consider in the design of the leadership

development program.

During the focus groups, students explained how general professionalism, aesthetics, and

food provided during the program contributed to their continued participation. Most of the

students appreciated having all needed resources in place prior to the start of the workshop. The

quotes below highlights some of their motivations for attending leadership trainings.

I think the certificate and medal help too. I think people like I have been attending some

seminaries, and they don't give any certificate. But if you are a professional, you'll be

needing those certificates for a promotion.

I think the esthetics of it. Having food for people, it's very enticing, and the certificate

and medal in the end. Because it makes people want to complete the three programs.

Everything is very professional when you come in. Everything is all already set up.

The logistical details of setting up the program and managing smooth execution seem to also

impact the overall delivery and perceptions of the program by most students.

Evaluation and Adjustments. After participating in a leadership lecture session,

students receive an email with a link to complete the electronic post-assessment related to the

outcomes of the session. Questions typically focus on general evaluation of the series as well as

specific learning content from the sessions (Appendix D: Post Assessment Questions). Students

are able to provide general feedback and suggestions for future workshops. Students are

required to complete a post-assessment for each session attended in order to receive participation

credit on their co-curricular transcript. Motivation to complete post assessment could be sparked

by the reward of a certification of participation and graduation medallion which is granted to

students who complete three workshops and the accompanying post assessments in one semester.

Adjustments to the workshop series are implemented over the course of multiple

semesters. The series has been ongoing for well over ten years. Adjustments range from the

facilitators' qualifications, to the room set up and more recently technology for live streaming.

For instance, only professional staff served as facilitators for this workshop series. This has been

adjusted to keep the quality consistent and appeal to students from undergraduate to graduate

level. Additional adjustments included modifying the room set up based on facilitation requests

and types of activities. For instance, the first session in the series includes a presentation and

trust activity. Round tables were on one side of the room; while the other half of the room was

left open for students to get first hand practice with the trust activities. Students are also

encouraged to submit suggestions on desired topic or general suggestions. Since the series are

scheduled in advanced, any request for specific sessions tend to be incorporated a semester later,

in consideration of the future curriculum. This study reviewed the spring 2016 semester

workshop series, which included two sessions on inclusion and working with differences. This

topic was intentionally included as part of the university's student affairs' goal to provide

inclusion training for student leaders. The decision around these key components seems to

connect with Lattuca and Stark (2009) suggestions for academic plan in sociocultural context.

As Lattuca and Stark (2009) mentioned a broad range of factors should be considered in

developing a curriculum. These results are in line with those prior recommendations. The

details around planning learning experiences matter. These elements directly impact students'

participation and outcomes from the workshops and hold direct influence on the resulting

instructional tools or methods student leaders identified as helpful in preparing them to address

complex problems. These design elements will later be addressed in the recommendation section

of chapter five; however, now we turn to our research questions.

What instructional tools or methods do student leaders identify as helpful in preparing

them to address complex problems? The first question of this study focuses on instructional

tools or methods which student leaders identify as helpful in preparing them to address systems

challenges. Data on instructional tools and methods used were captured by reviewing the video

recordings (see Appendix E: Video Analysis Worksheets) of the training sessions; as well as,

from focus groups. The majority of the participants identified several tools and techniques

including: PowerPoint; expert panel, simulations, group activity and open discussion; the

facilitators' qualifications, experiences, and background; concrete examples that enable students

to plan and practice the skills in their daily lives; and presenting complex information in a

relatable context. Elements of the academic plan impacted the effectiveness of all instructional

tools and methods. The data below are arranged by the type of instructional tools and methods

identified. Figure 1 illustrates the data review process that led to the resulting themes.

Additional procedures on data analysis are detailed in the data analysis section of chapter three.

Figure 1:

Instructional Tools and Methods

PowerPoint and WebEx

Seven of the eight sessions utilized PowerPoint in combination with other tools. See details on materials covered and tools utilized in Appendix E: Video Analysis Worksheets. PowerPoint slides served as a visual for students who participated from distance sites facilitated by Web Ex technology and services from the distance technology office. A technician was in the room for all the sessions to ensure that the technical systems were operating smoothly and video was streamed and captured. A student staff managed the WebEx account and relayed any comments or questions from distance participants to the facilitator. During the focus groups, all students offered recommendations for improving the sessions by reflecting on the tools and methods utilized. The recommendation included offering more activities and opportunities to interact with each other during the workshops. The extracts below were shared by multiple participants during the focus group.

…More hands-on activities and interactions with other student leaders about the specific lecture series topic.

Provide lecture on innovation and thinking outside the box.

Slides are sometimes boring. Include video and activities.

I would love to have the materials like the PowerPoint paper, which I can keep it forever; because sometimes I forgot or didn't attend the lecture; so I can still have it.

A majority of the focus group participants appreciated being involved in the presentation, sharing their ideas on the subject or being prompted with questions to help keep them engaged. The recommendations from participants listed above demonstrate the functional uses for PowerPoint presentations as a teaching tool; however, participants desired an interactive facilitation style. The quote below illustrates their appreciation for

an interactive style.

> I like when the speaker involves us. Even in the middle of the session like he's explaining something and asks questions. He already has a question, but he wants to know what our perspectives are on something. And if our perspective comes close to the answer he displays, it kind of gives the 'ok I know something about this', or maybe I'm thinking my process is similar to that.

While a few students mentioned that PowerPoint slides can sometimes be boring; they acknowledged that the slides provided a mechanism to follow the information; while also serving as a tool to reexamine and recall the material. Using other methods and tools in combination with the slides seemed to be appreciated, particularly methods that created opportunities for peer-to-peer interactions.

Expert Panel, Simulation, Group Activity, and Open Discussion

Two sessions included a discussion panel of content experts, one consisted of professionals in leadership positions and the other consisted of student leaders from student organizations. The session on building trust involved all students participating in a blindfold simulation on building trust and entailed interacting with the entire group, as well as, trust activities performed within pairs. A session on the topic of inclusion entailed a small group project, where students worked in small groups at the tables to develop a vision and made an oral and visual presentation using the provided flip chart and coloring pencils. The excerpt below is from the focus group and illuminates students' appreciation for interactive teaching techniques which allowed students to both move around the room and share their experiences with each other.

> I like when you move around. Because when people just sit in their seats, great yes

you're sitting next to somebody, but like 'hey how are you?' But when you move

around, it's more like an icebreaker and then people are a bit more relaxed. And then it

keeps your blood flowing; so you can pay attention to the lecture instead of just sitting

here looking at the screen.

A majority of the participants in the focus groups expressed the appeal of open

discussions and group interactions which seem to lead to learning from peers as well as the

facilitator. The quotes below reflect the thoughts of several students who participated in the

focus group and demonstrate the broad range of benefits from students' ability to interact with

their peers during the workshops.

Group talks really help because you can hear others people's opinions and relate it

to your own. In my case, I really like all the topics because they're all really

constructive not only personal, but also professionally. As a student it was great

to find that connection.

I like the part where we had to define stuff; so like we had to work together to

define something, so the collaboration part.

You get to interact with others. I think that's a good start with being a leader.

You try to get the opinion of others and agree on what to write down. Because

others will have other definition, and we need to present that.

I think interaction and participation makes a big difference. I think it is different

when someone gives a lecture, and when you actually engage yourself either

through discussion or through activities, that makes a big difference.

The interactions facilitated during the leadership workshops seemed to have benefits well

beyond the skills outlined in the program objectives. Interactions during the sessions, enabled

students to compare their perspectives and cultural norms. The cultural norms are further

explored in the section of this study that focuses on cultural intelligence. The excerpt below

highlights the development of communication skills as well as some cultural norms and

understanding.

> The communication skills and interacting with others. When the speakers would ask you
> to do something as a group. You also learn different points of views of people when the
> speaker would ask questions and you hear different participants would give different
> answers. So you have an understanding of different people.

> Students' ability to interact and be social with their fellow organizational leaders on

relevant topics appear to attract participants to the program. This seems to have encouraged

organization leaders to invite other members to attend the workshops as well. The quote below

illustrates the reflection of a student organization leader who first struggled with motivation to

attend an initial session. This individual continues to attend the workshops after surpassing the

three required sessions for a certificate. The quote further demonstrates the motivation linked to

the content, and the ability to share the experience with fellow team members.

> I agree with that like completely having everything there like the food and it get people
> in, and then once your three is up, cause I've been to like five of them. Like at first it's
> hard like I got to get up, I got to go to this thing. Like I really don't want to go, like for
> the first one. Then once you're there, it's I got to go cause this one is gonna be really
> good. You should come with me. That's how it became. So like me and all my eboard
> are sitting there like, you, did you hear what she just said? [Laugh].

Facilitators' Background, Experiences, and Teaching Style

The qualification, training, and experiences of the facilitators themselves were not lost upon the majority of students. All students respected the multidisciplinary perspectives of facilitators from varying fields and leadership backgrounds. Some students seemed to highly regard the opinions and strategies of leaders who they perceived as highly skilled and competent. This concept is highlighted below.

…People from different segments than just [name of office that sponsors the workshop], because they are leaders already. It's like well you deal with that already. You're not really struggling with it like most of us do. And having like engineers and business, and they all come and talk to us. And that really helps.

As was mentioned earlier, students welcomed the opportunity to follow up with facilitators. It was typical for a few participants to take the time to connect, exchange contacts or express personal appreciation to the facilitators immediately following the workshops.

The facilitators were from various colleges and departments across the institution. Two facilitators were employed with local companies (see details in Table 1: Sessions and participants below). Facilitators volunteered their time for preparation and presentation of the sessions; they habitually offered their availability for follow-up questions and even meetings with students. The quote below was extracted from a focus group participant and illustrates some students' appreciation for faculty's availability.

At the end, some of the speakers are available. So, if you feel that information was helpful for everybody to hear, but not everybody was there. You could schedule appointments with them.

This quote also demonstrates students' shared interests regarding workshop topics and

opportunity to connect with faculty on campus. All the students who participated in the focus

groups shared their appreciation for the varied background, style and experience of the

facilitators. The quote below demonstrates the appreciation for the facilitation style.

> And I notice this one speaker when I ask questions. He throws back the question to me.
>
> He involved me in trying to get to the answer; so I remember because he involved me. I
>
> can't remember exactly what it was. I think it's all about how you become a good
>
> convener.

As is evident in the quote above, students attained a sense of facilitators' interests in

their engagement and growth based on the facilitation style.

Providing Specific Examples Enabling Students to Plan and Practice New Skills

Methods that provided opportunities for exchange of ideas and concrete examples on how

to practice the skills seem to help a majority of the students in addressing their own problem-

solving. The first quote below provides an example of the benefit of practice; while the second

quote provides an example of how students grasp the concepts of the new skill by utilizing a

concrete example. This quote demonstrates how providing an example on inclusion allowed

students to fully grasp specifics, envision the skill in practice, and then possibly plan and

implement their own practice of the skill. This process was highlighted in the literature review

as described as a process of learning, seeing, planning, and doing by Figueroa, (2013).

> There was a lecture about listening, and they actually gave an assignment after the
>
> lecture. We practiced listening even when we had the urge to say something. Just
>
> practicing listening skills. I think that was a tool or method that helped me, because I
>
> actually did it. And when someone is talking you always want to respond. And you do
>
> not listen. You just kind of hearing, cause it is harder to listen especially when you

already know what you are about to say right after that. So practicing that actually

helped.

I love the inclusivity [session from leadership workshop series] because usually with

clubs it is so vague. You try to plan events and stuff and you find nobody is coming, but

if they are more involved then they come you know.

The example above highlights inclusion and the concept of facilitating inclusion by

stimulating others to contribute. Excerpts below will further highlight benefits of this teaching

method which outlined specific examples to induce practice. Practice provided students the

exposure in addressing complex problems, and this helps to provide a model or starting point in

addressing future complexities.

A majority of the students who gain exposure to critical elements concerning problem-solving

during the leadership workshop clearly identified these elements as they articulated their steps towards

systems level problems solving. The quotes below are from focus group participants who attended the

problem-solving workshop. This illustrates how prior exposure afforded students an advantage in

considering numerous factors and provided a model to reference in their approach to problem-solving.

Clarify the problem, analyze factors associated with the problem, look at all potential

solutions, consider tradeoffs, and approach the solution in a manner that lowers

consequences.

I think first clearly identify the problem is the first step… So I think it's important

to clarify the problem first. What are the other factors associated with it? Try to

start one step forward and analyzing it, and how to get the solution. How many

possible solutions are out there? And which solution works better.

Usually, there is a tradeoff between that space and time. In [some] case it could

be money and time, and in some cases we need to decide which we're going to go

for. [Trade off].

… For someone it might look simple, for some, it might look complex. So it's

just the complexity. I think, I would go for [consider] the consequence if the

problem is not being solved. But when I look at the consequence. I think, how

the solution could be done; so the consequence is lowered.

Look at the problem. I would start with asking questions. What? When? Why?

And How?

Another student, included in the quote immediately above, articulated the process of

problem-solving as a series of questions as outlined by the workshop's facilitator. This, along

with the other quotes, highlighted the importance of exposure to problem-solving enabling

students to start with confidence and referring to advice from a seasoned professional. The

quotes above further affirmed the literature which stated that students can use models to address

future challenges, and problem solving can be taught.

Prior experiences engaging in work towards a group's goal influenced students' abilities

to appreciate the concepts in the workshops. This enabled students to readily realize relevant

connection and improve confidence in their abilities to solve complex-problems. The sample

excerpts below illustrate how some students relate the concepts in the lecture to prior work

experience or concepts from a class. One student shared her connections with the concepts and

her volunteer work:

After my navy career, I did a lot of work in my church; establishing committees and

getting those up and going. So, I feel both from technical and people-oriented aspects, it

really does impact the kind of complex problems that we are trying to solve.

Another student referred to her career as a professor:

I'm currently an assistant professor back in my country. The challenge is how do you get

each of the faculty members involved in the activities? That's why I appreciate the

inclusivity workshops very much. Before, the challenge was that some faculty don't do

anything. My attitude before was ok, if you don't want to participate. When I attended

these leadership lectures, I understand how you can get them involve and actually give

them roles to increase their participation.

Another student referred to her consulting work with global companies:

In my last job, I used to work as with French management and Indian management. They

both use to have conflicts. So I use to be submissive to both teams. Even when I knew

something was going wrong, I couldn't say that, because I felt it would hurt them. I let it

happen even though I know it was wrong, and I faced the consequences.

Prior experiences or exposures served as scaffoldings and provided relevant relatable

examples for students to apply more complex thinking and problem-solving approaches.

Students with these experiences also seemed to provide more credibility for their peers, similar

to having an expert facilitator. Students with more complex exposures seemed to benefit most

from systems workshop. While others might start asking questions as they approach new

challenges. From the examples above, it was evident that specific leadership experiences were

not as critical as long as students related the concepts. Prior experiences that enhanced students'

outlook for problem solving, occurred on the job, in churches, volunteer positions, and student organizations on campus.

Presenting Material in Relatable Context

Another method all students identified as helpful was the facilitator's ability to present information in a relatable construct. Regardless of the quantity and complexity, the ability to see relevant applications in their lives were perceived as helpful by the students. The quotes below demonstrates the complexity of the session and methods the facilitator applied to convey concepts in a relatable manner and scaffold the lessons.

My favorite one, the systemic thinking one. There was a lot of information, but he also did a good job having us apply it to like buying a car, buying a house. He really showed that looking at complex problems is not just for these huge worldwide problems like world hunger or disease, but the simple things also have a lot of factors going into it. I think that was very useful for life.

And I think that's the beauty of it. It's like you use it as a leader here at ODU, but then you use it in life to be a better person.

I think that helps when you can use it with life; then you can use it in your groups. It helps you to be more comfortable.

Not only was presenting the material in a relatable way important, but the relevance of the topic for audience future application was also essential. The quote below illustrates the relevance of specific sessions to a specific student. Since students saw session descriptions and learning objectives when they registered for a session; they were able to conceive a general idea regarding the content.

The topic I really like the most, I learned a lot, was the collaboration, collaborative

leadership and inclusion. Really like the role transition lecture. Next semester we will be taking a position on the eboard; so that was really right time for us. That was awesome. I really like the multiple perspective problem analysis. I like applying it in everyday problems.

While presenting material in a relatable form was helpful. For some students, specific sessions appeared complex and beyond their full grasp. Nonetheless, students all reported attaining some lesson to take-away.

The lectures themselves with having different people teach different lectures, it also helps me learn different people's teaching style. Like the last one was from engineering, he had so many charts and graphs. I was like, I'm education. We like pictures. We like colors. And I'm like ok, but that taught me that different people learn from different styles.

I think for the most part it's something you can learn to cultivate within yourself. Rather than a separate skill maybe Dr. [name of facilitator] mind mapping you might have to learn that a little bit, but for the most part you can put these skills into practice almost immediately.

The session being referred to above is critical for this study; since the curriculum progresses to this final content which is a direct element of this research on solving complex problems. This will be revisited in more details as we delve into question two. Nonetheless, the quote above illustrated drawbacks of an audience with a broad spectrum of backgrounds, experiences and prior exposures.

Applying Skills to Life Challenges

All students appreciated the ease of application of new skills or strategies to broad aspect of their lives. Some students explained how they applied skills to current work roles, current leadership positions, and life in general; while a few anticipated the ability to apply the skills in more complex future leadership opportunities. Overall students expressed the importance of practicing the skills and applying them to real-world situations.

Overall, the whole series just learning about the different characteristics different people expect leaders to have; so we can learn how to cultivate those skills and qualities.

I think for the most part it's something you can learn to cultivate within yourself.

I think that helps when you can use it with life; then you can use it in your groups. It helps you to be more comfortable.

I really like the multiple perspective problem analysis. I like applying it to everyday problems.

In my case, I really like all the topics because they're all really constructive not only personal but professional. As a student it was great to find that connection.

I appreciate that we can apply the systems thinking in real life.

Learning how to approach complex problems, particularly in a multidisciplinary group is incredibly useful in many aspects of life. A few students realized several benefits of bringing friends or fellow leaders along. It appears that participation in the leadership workshop along with fellow organization members eased the process entailed in working to implement any relevant strategies or ideas. It is possible that ideas generated during the workshops were attributed to the facilitator which could aid reception by fellow members. The excerpt is a reflective statement as a student re-lived the idea generation process during the focus group.

I got to go cause this one is gonna be really good, you should come with me. That's how

it became. So like I and all my eboard are sitting there like you, did you hear what she

just said'. You need that one. I'm gonna start that one for you [insinuating how they

interacting with each other during the lectures].

The quote above demonstrates a leader planning to utilize strategies explained during the

leadership workshops.

And a lot of our scholars attend these leadership lecture series, and they've been utilizing

networks and reaching out and talking to people we don't usually talk to; so we utilize a

lot of the skills we learn here during leadership lecture series.

Students' ability to apply to the skills to personal life situations, in professional roles and in their

students organizations enable them to see relevance of the skills in real life context.

Lattuca and Stark outline critical elements that should be consciously determined when

preparing and designing leadership development programs.   These elements provided important

guidelines in framing the response to the first research question.   Addressing the themes that

supports teaching techniques and methods brings us to the conclusion of the first research

question and allow us to now focus on the skills that best support student leaders.

The next research question in this study focused on what skills best support student

leaders' ability to conceptualize and address systems-level leadership challenges? Data source

supporting the finding for this question consists of observation of the training workshop (see

Appendix E: Video Analysis Worksheets), post assessments (see Appendix D: Post Assessment

Questions), and focus groups. A total of 135 unique students participated in the workshop series,

47 were males and 88 females. Of the total 135 students, 40 attended three or more leadership

sessions and completed the accompanying posts assessments which qualified them to earn a

certificate. Table 1: Sessions and participants includes break down by demographics for

individual sessions and reflects the total 280 participants for all eight sessions.

Table 1

Sessions and participants

Leadership Session and Facilitator	Date	Total	Male	Female	Assessment
Developing Trust Among Teams and Organizations Director, Recreation and Wellness	1/27	27	6	21	16
Inclusive Leadership: Investing in Relationships Senior Lecturer, Instructional Design & Technology	2/3	17	1	16	12
Difference Matters: A Commitment to Change and Inclusivity Lecturer, Department of Communication	2/17	42	1	41	31
Your Leadership Image, Senior Executive, General Electric	2/24	38	10	28	28
After College: Leadership Preparation for the Future by Panel composed of Director, Student Involvement office; Corporate Recruiter, Norfolk Southern; Associate Director, Career Development Services	3/2	34	10	24	29
How to Be an Effective Collaborative Convener by Using Social Capital professor and chair, Director for School of Public Service,	3/16	28	10	18	21
Leadership Transition by Associate Director, Student involvement and panel of student leaders	3/23	46	20	26	27
Thinking Systemically: A Path to Improved Leadership Associate Professor, Engineering Management & Systems Engineering	4/6	48	19	29	26

Lahey et al. (2011) specified some outlines for conducting the subject-object interviews. They advised providing keywords on notecards as a conversation starter and some guidelines to provide context for the phenomenon being explored. With this guidance, notecards served as a self-reflection for the focus group participants and provided control on the direction of the focus group and what the participant wish to share. This allowed for a more open-ended focus group where each participant provided depth of their experiences and best informed an understanding of the phenomenon and the participants' structural development. This process of exploring how the participant makes meaning of the experiences provided an understanding of how one might best support student leaders' ability to conceptualize and address systems-level leadership challenges.

Data was analyzed base on Moustakas's 1994 modification-horizontalization or identifying non-repetitive statements; textual description or grouping data into categories based on the meaning of experience; and structural description or identifying multiple potential meaning and depth from textual description. This process was utilized for both unobtrusive data attained from the post assessments and data from the focus group. Open coding allowed for additional codes and themes to be inserted with new rounds or reviews. The data was grouped by categories based on initial codes, then reduced based on relevance to the phenomenon. The next step allowed for the textual and structural description. Figure 2: Codes and Themes from the post assessments and transcripts provides an example of actual codes and frequencies of the codes. Each round of analysis for all qualitative data review was followed by reflection on connection to the research questions which lead to the final themes as illustrated in the figure below and further detailed in this report.

Figure 2

Codes and Themes

Read and reread focus group transcripts, post assessment. Watched video recordings and reviewed transcripts of training sessions for general ideas and specific training tools utilized: unit of analysis: thought, how to apply learning/skill

Reflection: Connection of codes with literature: Know, see plan: Application of learning: Teaching methods, Instructional Processes

Initial round of analysis: Develop first set of codes. Followed by next round of analysis and searching key words. Develop color codes and search for frequency

Compare color code visual to numeric frequency: process with key word search and initial codes

Research Question 1a: Skills to address systems challenges

Codes & frequency: Communicate (20): trust, relationship, different (18), feedback (10), mindset (4)

Inclusive Leadership: transformational, collaboration leadership characteristics

Trust: Conflict resolution, multiple perspectives, Communication: listening, confidence

Building Relationships: making connections and building networks/emotional intelligence

Themes: Inclusive and Collaborative Leadership
Including Others and Providing Opportunities for Meaningful Contributions
Building Trusting Relationships and Networks
Creating Environment of Idea Sharing and Risk Taking
Seeking Out and Listening to Others' Perspectives

Codes & frequency: Self: (25) : self-improvement, push self problem (9), grow (4), confidence (17), change (9)

Developing others/self

Cultural Awareness
Global competencies

Themes: Self Awareness, Emotional & Cultural Intelligence
Recognizing and Developing Strengths and Growth Areas
Understanding the Desired Characteristics and Leadership Expectations
Leading in Global Environments

Input from the research team was shared and used to re-examine and reduce themes. Finally, the researcher reflected on the students shared experiences and connection to the research question of what skills best support student leaders' ability to conceptualize and address systems-level leadership challenges. The recording of the leadership workshops provided rich data and a critical source to triangulate and verify the experiences students conveyed during the

focus group with those observed during the workshops. Saldana (2013) advised that video data should be coded multiple times allowing for different points of focus such as facial expressions, or other body movements. In essence, he challenged the researcher to capture the big picture; while pay attention to small details. The detailed written transcripts of each workshop were reviewed and video recordings were surveyed. After a review of each session, a video analysis sheet documented a summary of each session (Appendix E). This was a critical source of data for question one in combination with the information attain from topic b (see research protocol in Appendix B) during the focus group.

Skills for Meaningful Change at Systems Level

The second part of this study focuses on the specific knowledge, skills, and abilities which best support student leaders' ability to conceptualize and address systems-level leadership challenges. Students identified 1) inclusive and collaborative leadership skills, 2) self-awareness and 3) cultural and emotional intelligence as critical components for problem solving. Their examples demonstrated a wide view of each theme of skills which are further clarified by functional areas. For instance, the inclusive and collaborative leadership theme includes the ability to perform the following functions: including others and providing opportunities for them to meaningfully contribute; building trusting relationships and networks; creating an environment of idea sharing and risk taking; and seeking out and listening to others perspectives. The next important skill-sets required for systems change comprise the themes of 1) self-awareness and 2) emotional and cultural intelligence. These incorporate the ability to perform the following functions: recognizing and developing strengths and areas for potential growth in self and others; understanding of desired characteristics and leadership expectations; and global

competencies to succeed in diverse environments. Table 2 below provides an overview of the

desired skills and functional areas and abilities to impact systems level change.

Table 2

*Skills for Meaningful Change at Systems Le*vel

Skills	Ability to perform these functions
Inclusive and collaborative leadership	Including others and providing opportunities for meaningfully contributions
	Building trusting relationships and networks
	Creating an environment of idea sharing and risk taking
	Seeking out and listening to others' perspectives
Self-awareness, emotional and cultural intelligence	Recognizing and developing strengths and growth areas
	Understanding the desired characteristics and leadership expectations
	Leading in globally diverse environments

The excerpts below are grouped by themes for the various skills required for meaningful

change. The post assessments significantly informed this part of the study. Post assessments

were coded by types of skills. Following the first round of coding, a search for keywords and

frequency of response assisted in the process to verify search themes and minimize researcher

bias. Codes and sub-codes were collapsed to formulate themes. These themes were triangulated

with data from the focus groups as indicated below.

Inclusive and Collaborative Leadership

Addressing complex problems demands skills for meaningful change. This entails building leadership strength beyond the individual level, and focusing energies at the group, organizational and systems level. All students believed that inclusive and collaborative leadership provides an advantage in addressing systems-level challenges. These skills facilitate an understanding of environments and the systems leaders hope to change. The students' quotes below illustrate relevance for inclusive and collaborative skills in addressing systems level challenges.

> If you are able to collaborate and be inclusive, I think you will be able to influence more
>
> impact in the society you're in, and be able to understand the people you're dealing with.
>
> Stepping back and allowing others to like help out. That's my biggest issue because I
>
> just feel like, not like others can't do it, but they tried, ok maybe they're not putting in as
>
> much effort, but sometimes you have to collaborate.

The skills for inclusive leadership and collaboration are further explained by the abilities and functions they serve. Those sub themes which are outlined below involve: Including Others and Providing Opportunities for Meaningfully Contributions; Building Trusting Relationships and Networks; Creating an Environment of Idea Sharing and Risk Taking; Seeking Out and Listening to Others' Perspectives.

Including Others and Providing Opportunities for Meaningfully Contributions.
Inclusive leadership skills were reported as the most critical in solving systemic problems. As all focus group participants described the required skills, inclusive leadership enveloped other sub-skills. Broadly speaking, students' implied a definition of inclusion that entailed involving

others and being willing to relinquish ownership; thereby enabling others to contribute. Below

are samples of students' descriptions of inclusive leadership skills:

> Stepping back and including others seem to be the most beneficial skill.

> Another thing is the collaboration between members, inclusivity, assign roles to involve
> every member.

> And if sometimes [in the past] I'm not satisfied, I would do it myself. So, in this case, I'm
> being able to let others participate. It reduces the burden and we are helping others to
> also improve themselves as leaders as well.

> Recruiting and including other leaders and encouraging them along the leadership path

was seen as a powerful method to deliver change at the systems level. The extracts below

demonstrate a few students' reasoning and process of encouraging others to embrace leadership.

> And you have leaders, whom you know would be good. You should just say hey, you
> should try this. Then it's up to us older member to support the new members. Cause
> maybe they are scared to try it, but it's up to us to nudge them just a little bit.

> Then also the passing on possessions and when you graduate because you work so hard, I
> worry that you work so hard for four years, then what happen to that when you move on
> with your life.

> When I attend the lecture, my point of view is how I am going to apply this when I go
> back to work. So for me it's inclusivity. Include everybody, so they understand they have
> roles and appreciate that they are contributing something.

The focus group participants concluded that applying both inclusive and collaborative skills,

where others could meaningfully contribute, facilitated greater impact at the systems level.

Building Trusting Relationships and Networks. Several skills were shared as critical prerequisites for inclusive leadership. Relationship building was a significant competency in this area. Majority of the students emphasized the importance of working on relationships and building trust. According to focus group participants, creating conditions that foster effective working relationships eased the process entailed in breaching complex problems. The quote below recognizes the significance of relationship building.

> Don't be afraid to create and use a network of people. Those personal
>
> relationships are really helpful when you are trying to get things done; so be
>
> collaborative.
>
> What I learned, a big one was trustworthiness. If people don't trust you, and you
>
> don't build a relationship with them, then it's gonna be hard to ask them to do
>
> something. People are more willing to help you if they know you.

In the relationship building and trust examples above students emphasized the importance relationship building plays in working toward solving problems.

Creating an Environment of Idea Sharing and Risk Taking. A sub-theme of inclusive and collaborative leadership skills is the ability to create an environment that encourages idea sharing. The following extract shared during the focus groups captures students' experience of overcoming the fear of conflict and growing to appreciate new ideas. "I was afraid to cause a conflict, but now I understand, you have different thoughts. If you don't agree with someone, it can create something else."

Throughout the focus groups, it was apparent that the ability to embrace others in a manner that honored their contribution to the team was important in reaching the groups' objectives.   Participants explained how working towards meaningful change encompassed a

willingness to expand beyond skill development, to also take risks and lead boldly; and by so doing, permitting others to recognize their abilities. The quote below points to the bold leadership students described.

…The first impression of people. Because you could be a great leader, but it won't matter if you don't show it... I also like the point of taking a risk. So I might be a leader. In some case like I might be afraid, but if I don't take the risk, I will never know.

All the participants consistently pointed to relevance of inclusive and collaborative leadership. Nevertheless, students also verbalized the willingness to take risks and to act even in the face of fear. They all advised to approach complex problems by involving others as a counterpart. Practicing inclusive and collaborative leadership skills demands other functions and abilities; this leads to the next skills under this theme.

Seeking Out and Listening to Others' Perspectives. Students' ability to seek others' perspectives and listen was another appreciated skill under the inclusive and collaborative leadership theme. Participants expressed the importance of gaining problem clarity;   spending time defining the problem and understanding different perspectives prior to proposing solutions. The students' quotes below demonstrate students' appreciation for multiple perspectives:

I think the ability to solve the complex problem is the open mind. If for example, leaders listen for everyone's perspective maybe they can solve the problem, because one person cannot see the whole problem. Each person have different experiences; so they can see different. They can see the problem differently.

Another student continued to agree with this participant:

I agree on that perspective because in my case, I usually try to solve a problem starting

with the solution. My solution, but I don't figure out what are my resources available.

What is the whole picture perspective not just mine? Reasoning to the other people.

Looking at systematic thinking; the problem is in the eye of the beholder.

I think it helps me to become more open-minded. Like understand other's perspective; so

if you understand their perspective you have a better solution that would benefit more

than yourself.

The quotes emphasized all students' acknowledgment that at a minimum, working

through complex problem requires different perspectives. Examining the problem from a

broader perspective allows a group to reach the systems level and appreciate that the problem

varies dependent on who is viewing it, and so do the solutions. Students' discussion revealed an

awareness that solutions shift according to values and perspectives. The excerpts above

demonstrated an understanding that complex situations demand different viewpoints in order to

comprehend a broader understanding of the challenge. Listening could enhance the

understanding of the challenge and make visible the potential benefits and pitfalls of proposed

solutions.

In addition to inclusive and collaborative skills that demands seeking out and listening to

different perspectives, addressing systems level challenge requires self-awareness, as well as

cultural and emotional intelligence.

Self-Awareness, Emotional and Cultural Intelligence

As there is not one set formula for leadership, there is not one set of skills for problem-

solving. However, problem solving entails reflection and becoming aware of existing resources

and limitations. Students verbalized a transformation from former perception of managing tasks,

to realizing the importance of including others regardless of gaps between performance and the anticipated outcomes. Several students described a transformation in their leadership style as a result of intentionally incorporating collaborative leadership skills in their practice. Awareness is a requisite for the transformation and resulting growth. All students acknowledged that addressing complex problems encompassed both technical and human factors skills; hence emotional and cultural intelligence are critical factors in building and sustaining relationships that are required for systems level change. The excerpt below illustrates the importance of emotional intelligence.

> I think I also learn to add on to problem-solving, cause there are two component one is emotional and one is more like the business oriented. So if you do have a conflict with someone it's important to see their rational behind it before you just in and try a solution. The emotions might be a part of the problem; they might misinterpret it.
>
> I think often emotion gets the best of an issue; so I think setting aside the emotional problem. So people deal with their emotions in different ways; so the leadership workshop series has definitely taught me you have to just realize that others' emotions are different than your own. Others deal with their emotions differently.
>
> In the examples above students emphasized the human factors involved in working

toward solving problems. Similarly, the quote above highlights the natural existence of emotions, different values and perspectives when working with people.

Enhanced awareness enables students to intentionally develop skills associated with their personal deficiencies. Specific deficiencies varied by individual, hence self-awareness plays a

critical part when assessing areas of strengths and weaknesses. Growth areas could range from

working on shyness, developing empathy, compassion, and appreciation for all individuals'

skills-sets and their abilities to contribute and develop as a leader. This theme is further

explained by the ability to perform key functions: Recognizing and Developing Strengths and

Growth Areas; Understanding the Desired Characteristics and Leadership Expectations; and

Leading in Global Environments.

Recognizing and Developing Strengths and Growth Areas. Leadership for change

includes developing others or providing others with opportunities for growth. As a focus group

participant states "You're empowering them to help you".

Student leaders shared the significance of investing time to develop others, who

ultimately continue the unfinished missions that required the efforts of multitudes for an

extended duration. The example quotes below highlight different areas of development base on

the individual's needs.

It helps me further be compassionate. Because, as people and as students, people have

different lives.

I now realize that before, I was very comfortable being a little shy, and as [name

of student] said not being willing to say "no I don't agree with that", not to create

a conflict. But it has made me see the difference and thinking in another way.

I'm working on that, and it helps me a lot.

Another student leader shared:

I also learn knowing yourself as a leader; so if you know you don't have the

patience for this, you might want to take time for yourself and plan it out. So, as

you work with somebody who is opposite than yourself, starting to be assertive

but not bossing.

Others students chimed in with their limitations.

I struggle with asking for help.

I struggle with public speaking.

I have to learn when to be extraverted and when to be introverted. I have a

communication problem. Well, I'm decent, but my words don't come together. But like

my issue is, I'm really aggressive. So I'm like, I got to do this, and you do this. So, I

take over a task, but I won't tell anybody what's going on.   So the leadership workshops

have thought me that you need to talk to people.

Something that is difficult for me, trying to develop leadership around people who are ten

years younger than me. Trying to establish a relationship with them.

All participants acknowledged the importance of recognizing their differences and

embraced specific areas of challenges and potential growth. Students then transitioned from

their limitations to their areas of growth that resulted from participation in the leadership

workshops.

It helps me personally reaching out to people. I'm more or less skeptical about things.

This series gives me confidence. Ok no matter, correct or wrong you have to do it and

learn from the mistakes. It definitely helps my confidence.

I think the inclusive topic, it helps me like in the tolerance issue, because I 'm not that

tolerant. I really need to work on that; so it really made me think, I need to make a

change.

This awareness has the capacity to prompt proactive behaviors towards preparation for

life after college. Students' reflections above indicated some awareness as well as efforts to

improve. This applies to both sustaining the organization and self-growth. From the

descriptions above, the gaps in specific skills that lead to desired leadership varied by the

individual's capacities. Awareness enabled the individual to acknowledge the gap and work to

meet the capacity by engaging others in the leadership process. This awareness of others'

capacities also ease that facilitation of growth opportunities for all involved. The quote below

illustrates the benefit of seeing strengths of other participants who engage leadership

development.

> I think one thing that has helped me with my ability to lead. I don't know I can point to
>
> one thing, but I think, just coming in this room [focus group was held in the same room
>
> as lecture series] and seeing even a university is investing in us as a student it makes me
>
> really want to lead better. Cause it really helps just like seeing everyone and the people
>
> who come week after week, and they kind of have been able to develop their expertise
>
> and it makes me feel that if I just continue doing what I'm doing, taking the things that
>
> they are teaching me and informing me about, that I can also get to that place where I can
>
> share with others some of the things that I have learnt.

Consistent with the theme of recognizing others' strengths and abilities, students also

seem to appreciate seeing their peers who attend the workshops being able to efficiently lead.

This appears to inspire other participants. The quotes below highlight participants' appreciation

for the expertise of their peers; as well as, simply realizing that they cannot do everything.

> A true leader collaborates and steps back when necessary, shows initiative, and
>
> divides work. The president can't do it all. Learn to communicate with others and
>
> how to lead team members or group members.

[If,] you're not the expert on that field, it's learning from others.

Students expressed a general yearning for learning and recognition that they need to rely on other's expertise. This was reaffirmed in the statements above.

Understanding the Desired Characteristics and Leadership Expectations. Students attained leadership abilities beyond the objectives of the workshops' content. These competencies directly link with their ability to lead successfully across environments. Participants reported the importance of gaining an understanding of appropriate leader behaviors and expectations from fellow leaders and facilitators. The sessions provided a forum where student leaders readily shared experiences and got feedback within a context where others easily relate. This guidance on expected behavior is evidenced in the reports below.

I learn how a leader should not be.

A true leader collaborates and steps back when necessary.

There should be a balance because usually, it's your peers. It's really hard if you were once with the pool with everybody, then you suddenly move up to be the president. Then it's hard to get respect from everybody. So you have to find that balance of hey yes, I'm in charge, but I'm still your friend.

It makes me think, how should I act? Normally I would act this way, but how would a leader act in these situations. I think that help me to develop leadership skills and apply what I have learned.

This general guidance for what is expected serve as a gauge for leaders to learn how to best adjust their leadership behaviors within different environments. The diverse makeup of the participants during the workshops and the focus group also emphasized the importance of cultural context and leadership.

Leading in Global Environments. Global competencies that facilitate the ability to lead confidently and communication in diverse settings were major themes of beneficial skills for both American and international students who participated in the leadership workshops. One American student verbalized the pressure on herself as a student leader to grow more cognizant of world views and cultures. This American student stated: "It's not her fault I can't understand her. It's my fault, cause I've not really been exposed enough to understand it. I feel I should be growing as well; so I understand."

> The face to face conversations really inspire leadership skills in me, and I know which areas I need to improve myself.

> I'm similar to most of you. I think it's my English skill is the problem. But I think in my country, I would be confident to be a leader, but in here maybe it's difficult.

> The problem is we can't exactly express what we want, because we search for words. And sometimes we worry what others would think about you. So in our culture maybe it might be different from yours. Maybe it's politically incorrect for them, and its ok for us; so sometimes you have to be sensitive.

> The workshops attracted a diverse group of students which presented opportunities for sharing of diverse cultural perspectives around leadership and addressing systems level challenges. This further exposed participants to a broader perspective. After hearing an American student disclose challenges, an International student stated:

> It actually amazes me that Americans actually have problems speaking. You too experience that same thing! We're not used to the language; so we have fear of speaking in front of people using the English language.

The focus group provided a space for students to share their individual shortcomings and realized that others from different cultural backgrounds also share their shortcoming. However, it brought awareness to the context of solving complex problems and leading across cultures.

The participants in this study shared the importance of inclusive leadership skills. Inclusion expands beyond having diversity and numbers and refer to genuinely enlisting and listening to the contributions from varying perspectives and the roles cultures play in this process.

Trustworthiness

This study included multiple data sources which augment insights; and triangulation of the data improved the overall validity and trustworthiness of the study (Hays & Singh, 2012). Multiple data collection from the video recording, post-assessments, and focus groups improved the credibility of this study.

As indicated earlier, the researcher's roles played a key part in determining categories and themes; as well as, in the interpretation of these themes. A reflective journal was utilized to increase awareness of researcher's views and perceptions; while research team debriefings were utilized as a method or achieving themes and minimizing bias.

Further exploration of skills gained by engaging in specific challenges and stratifying results based on individual's prior roles and experiences can further guide recommendations for leadership development trainings. Utilizing all data sources was critical in achieving a thick description of the lived experiences of student leaders. For a sample of codes see Figure 2: Codes and Themes. Further study or methods targeting leadership development programs could be beneficial in addressing any gaps in this study.

Results of Analysis

Themes were apparent from re-occurring codes. As Saldana stated, the "theme is an outcome of the coding, categorization, or analytic reflection" (p. 14, 2013). He encouraged pre-coding or highlighting rich passages that seem significant. This process is reviewed above and in Figure 2: Codes and Themes from the post assessments and transcripts. Saldana's questions for coding which includes, what are they trying to accomplish? What strategies do they use? What do I learn from notes? Why did I include them? What surprises me? What disturbs me? Were critical in the coding process and helped to shape each round of coding. Creswell (2013) "begin with five to six provisional codes to begin the process of lean coding. This expands to no more than 25-30 categories that then combine into five to six major themes (p. 184-185) in Saldana p. 24. Following this process of coding inspired confidence in the results outlined in this chapter and informs chapter five.

CHAPTER V: CONCLUSIONS AND DISCUSSION

This chapter presents an overview of the study incorporating the purpose, research questions, results, and implications for practice and areas for future research.

Study Overview

This study sought to better understand students' experiences in problem-solving that best prepare them to impact systems level change. This objective was explored by seeking deeper explanations and answers to the research questions. What instructional tools or methods do student leaders identify as helpful in preparing them to address systems level problems? I also explored what knowledge, skills, and abilities best support student leaders' capacity to conceptualize and address systems-level leadership challenges?

Following the guidelines outlined by Lattuca and Stark (2009), this study explored the academic plan for leadership development programs; both students' needs, and learning objectives were explored. Elements of the leadership program reviewed were the purpose, content, sequence, learners, instructional processes, instructional resources, evaluation, and adjustments to the leadership program in a co-curricular context. This study outlined these specifics elements which should be consciously considered for a leadership program. These elements provide important details in framing the response to the research questions and recommendations in this chapter.

As I explored knowledge, skills, and abilities that best support student leaders' ability to conceptualize and address systems-level leadership challenges, we referred to the scholarly literature which influenced the resulting themes and final recommendations.

Discussion of Major Findings

     Finding for Research Question 1. The data outlined students' appreciation for facilitators' multiplicity of expertise and experiences; teaching styles, tools, and methods utilized during the leadership workshops. Session topics, facilitators, and participants played a role in the final outcomes of the workshops. Students appreciated the ability to follow-up with faculty after the workshops, and facilitators' divergent backgrounds, styles and experiences. Tools like PowerPoint and WebEx were welcome in combination with activities and opportunities to interact with each other during the workshops.

     Regardless of the tools, the teaching style is critical. Students appreciated a style that enlisted their involvement in the presentation, that encouraged participants to share their ideas related to the subject, and that prompted questions that stimulated deeper engagement. Methods that employed expert panels, simulation, group activity, open discussions, and that provided specific examples which allowed students to plan their own practice contributed to profound learning experiences. Delivering relevant content in a relatable context was significant in attracting participants and holding their interests in the workshops. Relevance of the material and students' ability to practice skills in real life context was critical for the learning. These teaching tool enabled students to master content and gain models for future application. The development of models and the practice of questioning models is a critical component in systems thinking learning. All the students in the focus groups expressed their appreciation for the interactions; however, distance students who viewed live streams of the sessions seem to be disadvantaged by limited opportunities to share and interact with peers. While this is the first year of enabling the streaming technology, more intentional updates are required to enable

distance students to fully participate using methods that seem to improve engagement and learning in these sessions.

Findings for Research Question 1a. The second segment of this study focuses on the knowledge, skills, and abilities which best support student leaders' ability to conceptualize and address systems-level leadership challenges. Students identified inclusive leadership as most relevant in addressing challenges. Their examples demonstrated the scope of inclusive leadership which entails recognizing the potential of other leaders, self-awareness, and the willingness to review ones' shortcomings and consciously thrive for improvements, flexibility and compromise in realizing the progress of groups' objectives in competition with personal gains, and working to create an environment where individuals can share their perspectives and disagree without fear of conflict.

Critical sub-skills related to the theme of inclusive leadership encompassed relationship building and emotional intelligence, the ability to create an environment of trust and idea sharing, and seeking out and listening to others' perspectives. The views of participants in the focus groups support the literature which has found that complex problems commands the skills and endeavors of multiple perspectives. Effective problem-solving demands collaborative skills and abilities to perform collaborative functions. This supports the findings of Gerard and O'Leary (2012) who illustrated value for individual attributes such as open-mindedness, patience, change orientation, flexibility, interpersonal skill, group process skills, strategic leadership skills, and technical expertise. While this study illustrates the value of collaborative skills enabling students to work through conflict and use conflict to result in effective ideas, further study could provide clarity related to leading in paradoxical situations, and learning to apply scarce resources in contradictory yet interrelated environments. Gerard and O'Leary

(2012) states that collaborative skills as explored in this study are key to addressing systems

level situations that typically compete for limited resources.

Allowing students to explore the use of limited resources in paradoxical, systems level

challenges could further enhance future studies, and serve to better prepare students to meet the

leadership challenges they will confront. As Adams and Hester's (2014) stated, solving messes

entails the intersections of varying perspectives and constituencies, and resolving such problems

require both "hard (technical factors) and soft (human factors) perspectives". This study

revealed an alignment with Adams and Hester's conclusion, and supports systems thinking

methodology facilitated by seeking answers to the "who, what, why, where, how, and when"

questions. However, I believe that addressing 'why' questions related to the changes we

implement at the systems level requires honesty in explicitly confronting human factor

perspectives and competing values as we utilize scarce resources.

This study explores our first steps in training students to see the interconnections of

complex problems and to question existing models; so they might be better prepared to explore

the answers to worthy questions as they employ limited resources to systems level challenges.

Implications for Student Leaders

Student experiences and exposures in addressing systems level challenges enable them to

create models and further learn to question existing models as they approach future challenges.

Students who experienced exposure to theory and practice related to complex problems-solving

during the workshop addressed identifiable issues in working through complex problems. Prior

exposure provides an advantage when considering factors related to an issue and developing a

well-outlined approach to problem-solving. Exposure to problem-solving allows students to start

with confidence and gauge their approaches alongside guidelines of seasoned professionals.

Prior experiences served as a scaffolding and provided relatable context as students attempt to apply more complex thinking and problem-solving approaches. These experiences also seemed to confer more credibility from their peers.

Students can gain exposure and experience in systems level challenges by engaging in a variety of opportunities in the work environment, churches, volunteer positions, and student organizations. Confidently addressing systems level challenge require practice listening to different perspectives to understand a challenge from multiple angles. The relevant practice enhances students understanding of the scope of the challenge and open individual's mindset to consider negative consequences of potential solutions or non-actions. Student leaders hoping to gain better practice at addressing systems challenges are willing to address competing interests. Providing student leaders with exposure and practice addressing complex system challenges afford students an advantage in considering numerous factors and provides model to reference in their approach to addressing systems level challenges. One student described her model for approaching systems level challenges   "Clarify the problem, analyze factors associated with the problem, look at all potential solutions, consider tradeoffs, and approach the solution in a manner that lowers consequences." As I review her model I am re-assured that systems training enhances the ability to seek systemic solutions, while minimizing the creation of greater challenges.

Providing a model for systems thinking and practice in addressing system level challenges enables students to develop competencies for complex problem solving. Students gain practice in considering multiple solutions and potential pitfalls. Developing a model entails questioning existing models. Engaging students in this process improves their comfort with raising questions such as: Who? What? When? Why? and how?, as well as, improves their

ability to seek out diverse perspective particularly in face of competing interests or paradox.

Finally, the leadership training which provided students with the capability to address

complexity provided practice in applying limited resources at the systems level where they

encounter the intersection of competing interests.

Implications for All Leaders

Addressing complex problems at the systems level necessitates skills for meaningful

change beyond individual capacities and interests. Engaging inclusive and collaborative

leadership could stimulate change that addresses systems-level challenges. These skills allow

leaders to craft a broad scope of understanding of the environment and the systems they

endeavor to change. Addressing complex problems encompasses both technical and human

factors skills, as leaders work to address competing interests.

Engaging in systemic solutions acknowledges the value of developing others and

supporting them through growth opportunities. Recruiting other leaders and motivating them

along the way was recognized as a powerful way to deliver change at the systems level. Leaders

who desire systems change invest in others who ultimately sustain change efforts and persist

towards unfinished missions that require prolong duration. Enlisting other as your equal and

working together to resolve challenges is a critical strategy. Leaders of systemic change tend to

possess yearning for learning and respect for others' talents and contributions. Through

collaboration, genuine listening, and practice working through systems level challenges

individuals can be trained to see hidden patterns that are typically not addressed. Schechter

(2013) pointed to the ability to see hidden patterns of issues that should be addressed in paradox

and systems level challenges. Often, embedded in hidden patterns and responses to questions of

why we implement certain changes at the systems level, are varying perspectives on cultural

norms and values. Gaining the skills to collaborate and approach challenges with open

mindedness might better enable our leaders to implement systems changes that starts from the

common values and interests as oppose of implementing changes that fail to address common

vision.

Implication for Practitioners

As advised by Lattuca and Stark (2009), this study explored the academic plan for the

leadership development program. Students' needs and learning objectives were explored.

Practitioners working to implement leadership development programs should consider these

aspects of the learning initiative: purpose, content, sequence, learners, instructional processes,

instructional resources, evaluation, and adjustment to the learning initiative. Chapter four

specified details related to these considerations for a leadership program which impact the

overall program success. These elements influence who participates in leadership programs and

the achievement of program outcomes. Several additional factors including professionalism,

aesthetics, food, and rewards attracted students to the workshops and retained their attention and

participation. These elements were particularly critical since the participants do not receive

course credits. In this case, medallions and certificates of participation served to attract and

retain students. The overall quality and content of the leadership workshops continued to

influence students' participation after they receive the outlined rewards, while teaching styles

and opportunities for practice influence attainment and comfort with new skills.

Higher educational practitioners who design leadership programs serve critical roles;

these individuals are tasked with recruiting faculty and staff and provide guidance on desired

content. This role demands a thorough understanding of all the critical factors that contributes to

the learning initiatives, as well as, the ability to network and identify key contributors and

knowledge creators across the institution. Faculty shoulder the usual demands of producing research and teaching classes; hence, reaching out to them in a manner that inspires their contribution in the co-curricular context is essential. Knowingly, their areas of passion typically link to their research interests, hence meeting faculty and understanding their areas of interests is a typical part of the process. The practitioner has to build trusting relationships and a network of facilitators. Most critical is the ability to provide guidance and input on the content and facilitation process while acknowledging and respecting each contributor's varying background and expertise.

Similar to leaders striving to address systems change, this role recognizes that strong leadership programs include contributions and talents from across the institution. While student affairs colleagues produce great content within their areas of expertise and make great contributors to the leadership program, recruiting faculty from all colleges contributes perspectives that permit students to broaden their scope. Using a comprehensive model for leadership programs and using the systems thinking approach to update the model can serve to keep leadership training programs relevant.

Design of Leadership Programs

Designing leadership development programs that appeal to students' interests, funding sources, and facilitators are critical elements of consideration. Student participants in this study desired relevant material presented in an interactive and engaging teaching style, which they could apply to real-world challenges. Higher education funding for leadership programs is typically allocated based on a program's ability to achieved targeted outcomes that align with the university mission; hence assessment and adjustments to meet targets are essential. Developing

a program with the right combination of all critical factors could be the result of constant adjustments or a series of tweaks from one series to the next.

This study provides a starting point for a sample design for a leadership workshop series presented in the co-curricular setting of a large university. For details see *Table 1: Sessions and participants.* Leadership programs were scheduled consistently, and facilitators represented experts from various colleges and departments on campus and the community. The topics were relevant to the students' experiences and provided opportunities for students to gain knowledge, skills and relevant practice in addressing systems level challenges. The content reflected the current demands on leaders and the institutional needs. While the content was designed to progressively expand on prior sessions and provided scaffolding for future learning, the content could be beneficial as stand-alone workshops. Facilitators received consistent guidance and resources on desired focus areas.

How Leadership Development Programs Relate to Scholarly Research

The findings in this study support the current directions of scholarly research related to leadership development programs and further highlights the importance providing students the opportunities to practice leadership skills. Adams, Hester, Bradley, Meyers, and Keating (2012) remarked that systems theory provides a way to understand problems of a multidisciplinary nature. They believed that systems theory help to provide explanations and predictability when working with real-world problems. This study exposed student leaders to systems thinking and explored teaching tools, techniques and skills that best enable students to address systems challenges.   My conclusions, based on the findings of this research, are that students with systems thinking exposure are likely to utilize this model and seek to broaden their understanding to address future leadership challenges.

Kegan remarked that leaders must first realize that they hold certain assumptions, as they develop and move to more complex ways of knowing. Likewise, Swann et. al (2007) emphasized the importance of self-awareness. The findings of this study agree with these prior research findings that experiences and exposure influenced student leaders development, their conceptualization of systems within their environment, and help to make more visible the often invisible patterns and assumptions.

Bolman and Deal (2008) pointed out the importance of adding lenses to one's perspective. Providing students' with systems thinking training enabled them to recognize patterns, and to be more readily able to identify leverage in proposing solutions (Senge, 2006). To truly create change, a leader must understand how an issue intersects with multiple systems; since addressing one problem in isolation often triggers other issues (Senge, 2006). This position is supported by the findings of this study as student leaders outlined the importance broad-based perspectives when addressing systems challenges. McEvoy, Hayton, Warnick, Mumford, Hanks, and Blahna (2005) described a leadership development model that stresses the importance of not just learning the theory, but also the application of knowledge through simulations and finally mastering the application through the real-world environment. This study supports the relevance of providing these relatable experiences so students can plan opportunities and practice new skills. Figueroa noted that individuals in leadership positions often face conflict, and they can benefit from real life situations that enable the development of collaboration skills. This research outlines critical teaching tools and techniques and relevant skills that facilitate students' ability to address complex challenges.

Goleman (2009) used social neuroscience to describe how personal connections and people's emotional centers influence each other and can have positive or negative effects. His

research showed the need for leaders to encourage warmth and trust. The results revealed the

importance of developing trusting relationship and networks and the relevance of emotional and

cultural intelligence.

Recommendations for Future Research

This study examined a leadership development series offered on a college campus.

Students tend to participate in leadership roles and experiences both on and off campus.

Students' prior experiences influence their perceptions and comfort with practicing new

leadership skills. This study exposed students to the theory of systems thinking and included

their reports on effective methods in addressing systems level challenges. Future longitudinal

studies which first expose students to system thinking theories, then later review their application

of scarce resources or implementation of systemic changes in competing environments could

provide deeper insights for effective training methods.

Conclusion

The social change leadership model utilized on this campus sets the framework for

leaders to be cognizant of their values and behaviors that drive change for the common good.

Moving forward, practitioners and leadership trainers should ascertain that students practice

implementing systems change. Teaching others to see natural patterns and connections, to

question framework, actions and inactions, and to focus energies on levels that truly influence

change by first grappling with the question of why?, before moving to what? , when? where? &

how? is doable. The teaching tools to better accomplish successful systems level change are

outlined in chapter four along with the skills required for the process of leading through systems

change.   Responding to these series of systems level questions enables us to bridge the human

and technical elements which demands varied skills and perspectives. Peter Senge said

"Structures of which we are unaware hold us prisoners" (2006, p. 93). Teaching students a

systems thinking approach to complex problem solving unveils the structures and empower them

to address systems challenges.

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APPENDICES

Appendix A: Recruitment Email to Students on Problem-Solving Workshop

Students are encouraged to register via Monarch Link (url) for the upcoming workshop.

"Thinking Systemically: A Path to Improved Leadership"

Presented by Dr. [name of facilitator], Associate Professor, Engineering Management & Systems

Engineering on April 6, 2016 @ 12 noon

As leaders, we must encourage others to adopt a more systemic, or holistic, view point in thinking about and addressing problems. The key to thinking systemically is the popular saying, "think globally, act locally." As we attempt to address problems in our personal and professional lives, we must appreciate the benefit gained from *thinking globally* while we *act locally*.

As the underlying complexity associated with understanding modern problems has increased exponentially, so too must the methods we use to address these situations. This seminar will introduce participants to the benefits of, as well as some methods for, adopting a systemic, or big picture, perspective in making decisions, in an effort to become a better thinker, problem solver, and ultimately, a better leader.

Students who participate in this workshop will also have the opportunity to participate in a qualitative study which explores the complex problem-solving and teaching tools.

Students who participate in this workshop are also encouraged to participate in a research study. Please see Inform consent for details on the study.

We must appreciate the benefit gained from *thinking globally* while we *act locally*. As the underlying complexity associated with understanding modern problems has increased exponentially, so too must the methods we use to address these situations. This seminar will introduce participants to the benefits of, as well as some methods for, adopting a systemic, or big

picture, perspective in making decisions, in an effort to become a better thinker, problem solver, and ultimately, a better leader.

Students who participate in this workshop will also have the opportunity to participate in a qualitative study which explores complex problem-solving and teaching tools.

Appendix B: Moderator Guide

I.   Introduction (5 minutes)

A. The purpose of this focus group is to explore what skills best support student leaders' ability

   to conceptualize and address systems level leadership challenges?

        B.   Moderator introductions: "My name is _____ and this focus group is a part

                of a research study. Our job is to facilitate your discussion, record your

                responses, and keep time to make sure that we thoroughly cover ALL of the

                topics."

        C.   Group Guidelines

                1.   Moderator should speak less than 1/3 of the time

                2.   While one moderator facilitates the discussion the other will be taking

                        notes for analysis BUT NO NAMES will be recorded

                3.   Respect the confidentiality of each participant by not quoting or attributing

                        comments to anyone outside of the group.

                4.   All should participate

                5.   Discussion and disagreement are encouraged; no need to reach consensus

                6.   No right or wrong opinions; just different points of view

                7.   Only one person should speak at a time -- no side conversations

                8.   Please be open and honest about your attitudes, opinions, and experiences

                        -- we want to hear it all

        D.   Audio recording for data analysis [red light = ON]

                1.   **_ONLY_** the research team will have access to the tapes

                2.   Will be used **_ONLY_** for data analyses

3.   ***ONLY*** group results will be reported; no individuals will be identified,

however we may use some direct quotations to emphasize a particular

point

4.   ***Confidentiality***: Please keep confidential all information that others share

with the group when you leave

E.   "If there are no questions or concerns, let's begin!"

II.   Introduction of Participants (10 minutes)

A.   For your convenience, you all have **place card for your names**. Please indicate

your name as well as any leadership role you might hold. We will do brief

introductions.

B.   You all participated in the leadership lecture series.   On the **index card** please

briefly describe: What knowledge, skills and abilities you learned from the series

and utilized this semester?

III.   **Topic Discussion (50-60 minutes)**

   Topic A**: knowledge, skills and abilities helpful for complex problem-solving**

1. What are other knowledge, skills and abilities did you learned from the series?

2. How did you apply them to solve a complex problem?

3. How comfortable are you with using these knowledge, skills and abilities?

4. What prior experiences were helpful in your process of solving complex

problem?

5. In what ways do these experiences impact your ability to lead?

6. Are there knowledge, skills and abilities outside your limits that could improve your leadership?

Topic B: Leadership Lecture Series Included sessions on: Developing Trust Among Teams and Organizations; Inclusive Leadership – Investing in Relationships; Difference Matters: A commitment to change and inclusivity; Your Leadership Image; How to Be an Effective Collaborative Convener by Using Social Capital, After College: Leadership preparation for the Future; Leadership Transition, Thinking Systemically: A Path to Improved Leadership.

1. How did the sessions you participated in impact your knowledge, skills and ability to lead and create meaningful change?

2. What specifically about the session(s) impact your leadership?

3. What sessions/topic further your abilities in addressing complex problems and create meaningful change.

4. What teaching tools or methods employed in the leadership lecture series do you believe was most successful to help you learn to lead and address complex problems?

Topic C: **Addressing Problem to create Change**

1. Explain your strategies in addressing a complex problem.

2. How do these strategies impact your ability to solve real-world complex problems?

3. How is this different from your usual approach to problem-solving?

    IV.   Wrap-up (10 minutes): Please write on the **index card**:

1. If you had one recommendation to make about the lecture series what would it be?

Appendix C: Focus Group Invitation Email

You are invited to participate in a study on complex problem-solving using systems thinking. Complex problem-solving is now a demand for all level of employees. To explore this topic we invite you to share your thoughts at a focus group schedule for April 20 at 1pm in the Hampton Newport News Room.

As a participant in the Leadership Lecture Series "A Path to Improved Leadership" with [name of facilitator] and a participant in the study on complex problem-solving, we are particularly interested in your thoughts.

While the focus groups will be confidential, information in the form of direct quotes and summation of experiences could be used along with pseudo first names. Participant first (pseudo) name could be released in presentation of findings. In most cases data collected will be aggregated so that results cannot be linked to individual participants. However examples with specific individual's experiences will be cited.

Please let me know if you are willing and available to participate in the focus group. Your insight and experiences are extremely important to this study. I greatly appreciate your time and look forward to your response.

Appendix D: Post Assessment Questions

Did you find this leadership lecture series valuable to your organization? If so, how did this information help you?

Name three ways to create trust in a team environment:

How can you maintain trust in your organization or team?

What does inclusivity look like to you? How would you bring this into your organization or interactions?

How is your identity impacting your relationships?

Did you gain tools to help you improve upon ways to communicate among members of a diverse community? If so, can you explain how?

Why is it important, as a leader, to be able to communicate within diverse communities?

After this leadership lecture, how do you think you can improve your leadership image?

What strengths do you have within your leadership image?

After this leadership lecture, how do you think you can better prepare yourself for after graduation?

After this Leadership Lecture can you identify ways that you can best package your resume to meet the needs of graduate school and/or potential employers? If yes, please provide at least one example.

What skills might be helpful in facilitating collaboration?

Are the traditional skill sets for leadership applicable to collaboration? Yes, No? Please explain.

Collaboration Requires: A different skillset and mindset, is not about direction; it is about facilitation, places emphasis on consensus-building and inclusion, be respectful of all points of view and interests.

Agree/Disagree? Please explain

After this leadership lecture, do you feel more confident transitioning in new officers? Please explain why or why not.

Elaborate on one skill that you learned to effectively in transition in new officers?

Was this workshop helpful in your process to understand and address complex problems? Please explain.

Why is it important to really understand a problem before addressing it?

What are some factors to consider in addressing a complex problem?

Why is it important to consider multiple perspective in addressing a problem?

What is the significance of recognizing the larger system in which your problem exist?

Appendix E: Video Analysis Worksheets

Inclusive Leadership – Investing in Relationships

Step 1: Pre-Viewing

Title: Inclusive Leadership – Investing in Relationships

Date & Location: 2/3/2016, Hampton Newport News Room, Webb Center

Facilitator: [Name of faculty]-Senior Lecturer, Instructional Design & Technology & [Name of faculty administrator] - Interim Director of ODU Online International

Main concepts you think you will see in the video: How to prepare future leaders to include all parties in their organization and importance of getting everyone's input.

Instructional tools: PowerPoint with overhead screens (two screens front of room), Web Ex technology and technician in back of the room, paper, flip chart paper, pens, coloring pencils, handout with additional resources. Reference to monarch link – communication system for registration, post assessment and credit on co-curricular transcript.

Video length: 00:59:06

Discussion:

Small Group Activities:

Individual activity prompt: When you guys walked in, there was a sheet on your tables asking for you to create a visual representation of what you think of when you hear the word inclusion.

Reflection: What is the relationship between diversity and inclusion? Can one exist without the other? And so as you're going through and you're kind of creating your visual, I want you to take a look at what you've created. And then also think about what diversity is. Is this like two ideas that have a mutual relationship, an intrinsic connection?

Small group Share Activity Prompt: Go ahead and share your visual representation with your table mates.

Small Group Activity prompt: Look at the similarities that you guys have and create one group idea that you can share with the rest of us about what your group believes.

Come up with one vision for what inclusion looks like. You need to agree on that. To what extent did your visions have things in common? To what extent did you have different ideas about inclusion and diversity? Somehow merge that into one single vision for your group, represented on paper.

Presentation to large group: What we'd like to do now is hear from each table. We want you to share. Maybe you can stand up and show off your picture.

Open conversation on topic – prompts (visible on screen) to start discussion:

Reflection to discussion: What is the relationship between diversity and inclusion? Can one exist without the other? And so as you're going through and you're kind of creating your visual, I want you to take a look at what you've created. And then also think about what diversity is. Is this like two ideas that have a mutual relationship, an intrinsic connection?

Male share thoughts, second male share taught. Facilitator Commented: ladies we heard from two gentlemen. Nine students share their thoughts on discussion prompts.

Facilitator connects ideas shared to inclusion at [name of university] "we have diversity champions…".

Female comment on point referring to prior leadership (co-curricular) program. "We went to January leaders' retreat we were talking about connecting and collaborating with other orgs...

Camera angle, lighting, mode or tone of room? View of room from back.

Students seem engaged very interactive. Sit at table with other students leaving table completely empty. Get up and help self as needed. Facilitators walk around and help students with question. Re-phrasing what is on the screen.

 Limited view of students in room can see groups but not able to identify individuals.

Technician comes in to reset PowerPoint while students work in small groups.

Critical Messages: You are leaders and have influence to include others in your group. People in positions of power and leaders of multicultural programs don't often model inclusive behavior. As a facilitator we come short of a perfect score on this topic as well. You can be inclusive in small ways. Inclusion help us solve problems by gaining input from others.

General Observation

Interactions

Makeup /composition of audience: Not able to view much students two males ask questions & two females (voices).

Information gain that would not be conveyed by a written source? Gender, ethnicity, comfort of everyone participating.

Groups went up together to do presentations though one representative spoke on the group's behalf. Females were as represented as leaders for the small group. Sarcasm by one speaker was not readily obvious from transcript, but tone of voice in video recording made this very observable. Lower chatter at the table and facilitator working around to help students and observed as they did group projects was also beneficial from recording.

Facilitator's use of PowerPoint was to facilitate discussion as a secondary tool. For example the question prompts for discussion were on the ppt. Facilitators used several methods. Both facilitators took time sharing and they both shared examples from personal experiences. Use of individual, small group sharing at table and small group presentation at the front of the room. They gave several students opportunities to share their ideas on a single prompt. Both males and females share their ideas and prior experiences.

Appendix E: Video Analysis Worksheets

How to be a Collaborative Leader

Step 1: Pre-Viewing

Title: *How to be a Collaborative Leader*

Date & Location: 3/16/2016, Hampton Newport News Room, Webb Center

Facilitator: [Name of faculty] PhD. School of Public Service

Main concepts you think you will see in the video: How to prepare future leaders to work collaboratively within and across organizations.

Instructional tools: PowerPoint with overhead screens (two screens front of room), Web Ex technology and technician in back of the room. Reference to monarch link – communication system for registration, post assessment and credit on co-curricular transcript.

Video length: 00:56:00

Presentation up – 29:51 min, question: 30min-53:36min

Question: What is leadership?

Response from male student.

Traditional leadership, directive, authoritarian vs collaborative leadership

Task oriented leadership,

Relationship oriented leadership

Skills for collaboration? Mediation, good communication, extraverts, networks, consensus building, sustain relationships, expertise, identify resources, and build trust

Use local example. Elizabeth River project –

Successful in getting business (who want to make money) to be a part of clean river.

Get incentives lined up, non-threatening/ non judgment conversations.

Consensus building and including everyone. Respect all different points of views. Reduce fear. Identify common goals.

Different mind set

Open for questions: after 30+ minutes

Female: situation when collaboration is not working?

Working with others as oppose to talking to

Break down example to student groups working together.

Cannot be directive have to work together across organization to meet common goal.

Student share her example of current collaboration

Students question seem to indicate struggle with application of collaborative leadership.

Open conversation on topic – prompts (visible on screen) to start discussion:

Camera angle, lighting, mode or tone of room?

View of room from back.

Students seem engaged in question answer portion. Numerous students asked question. At least 1/3 of time is spent on questions.

Males sit close to each other. Mostly female in session. Camera scans around the room as students ask question. Students seem more professionally dressed than typical college student (blazers and long sleeve shirts).

Critical Messages: Skills for collaborative leadership.

Trust is important which is developed by relationship building

Not traditional skills since on level playing feel/reporting structure

General Observation: Information gain that would not be conveyed by a written source? Gender, ethnicity, comfort of everyone participating, students attire, professionally appealing appearance.

Facilitator seems extremely skilled in topic area. He's is able to field broad areas of question and connect concepts; while relate with relevant examples.

Appendix E: Video Analysis Worksheets

Video Analysis Worksheet Officer Transition

Step 1: Pre-Viewing

Title: Officer Transition

Date & Location: 3/23/2016, Hampton Newport News Room, Webb Center

Facilitator: faculty administrator with three students on panel

Main concepts you think you will see in the video: How to prepare future leaders to take on key roles in the organization

Instructional tools: PowerPoint with overhead screens (two screens front of room), Web Ex technology and technician in back of the room.

Video length: 00:46:50

Discussion: presentation of PowerPoint with resources, tips and recommendations by key facilitator for first 22 minutes including questions to participants.

Panel: Comprised of three students who are members of fraternity and sorority community, two females and one males. Camera zooms in on panel (22 minute point to 45 minute point of video). Each student shared their experience on running and transitioning the organization.

Questions from presenters: How many of you are organization leaders?

How many of you are aspiring organization leaders?

Questions from audience:

President of org which is 'going into hole', feel if she is not president the org will not exist. How to get others motivated?

Question from distance advisor via WebEx: tips for advisor. What are you looking for from your student organization advisor?

Response from panel: Show up. Check in with students so they don't feel like they are bothering you, different perspectives, availability.

Question: How to get involvement when you have limited time:

Answer from panel: behind the scenes involvement.

How to involve distance learners (not on campus)?

Tips from audience: don't get discouraged. People have kids, works etc. different situation just stay the course.

Camera angle, lighting, mode or tone of room?

View of room from back.

Students seem calm just sitting and listening. Some are eating. Get up as help self as needed. Some students taking notes.

View of PowerPoint on 2/3 of video screen

Speaker walk side to side of room in the general front area.

Limited view of students in room.

Student taking picture of panelists.

Critical Messages: Remind others of passion of why they joined the org; communication. Focus on organization not tasks. Fears of someone not filling shoes. – grooming replacement. Identify leadership in others. Tell others you believe in them.

Make reaching out personal matter.

Create position email accounts: for example Pan-Hellenic president account for new officer to have access to prior emails.

Effectiveness of the message intended to communicate?

Strengths and weaknesses of the tools?

Audience: Panelist seem very professional and comfortable speaking. Both male and female participants.

General Observation

Interactions

Makeup /composition of audience: Not able to view much students two males ask questions & two females (voices).

Information gain that would not be conveyed by a written source? Gender, ethnicity, comfort of everyone participating.

Appendix E: Video Analysis Worksheets

Thinking Systemically – A Path to Improved Leadership

Step 1: Pre-Viewing

Title: Inclusive Leadership – *Thinking Systemically – A Path to Improved Leadership*

Date & Location: 4/6/2016, Hampton Newport News Room, Webb Center

Facilitator: Dr. [name of faculty], Associate Professor, Engineering Management & Systems Engineering

Main concepts you think you will see in the video: How to address complex problem in a manner that results in meaningful change.

Instructional tools: PowerPoint with overhead screens (two screens front of room), Web Ex technology and technician in back of the room, paper, flip chart paper, pens, reference to YouTube video. Reference to monarch link – communication system for registration, post assessment and credit on co-curricular transcript.

Introduce topic and use pictures and phrases students might be able to relate to:

Slogan that you've probably heard think globally act locally. I mean.

Introduce familiar concepts/problems students likely to face in real life: buy a car.

Questions/answer: Where have you heard this idea?

Rhetorical questions. Discussion style. Graphs, Diagrams, photos, Venn diagram with key bolded words: complex problems: hard perspectives/ soft perspectives

Recommend Book: *Smart Choices*

Encourage sharing without disclosing personal information around problem.

Relate response to concepts he's teaching. Re-wording ex. student's response. It can be overwhelming so it's just easier to not look at a problem and tackle it.

Facilitator rephrase: So it might just be so much information that you can't make sense of. All that information. And so that's. That's a compliment certainly to the idea of uncertainty. But it has its own sort of independent lens not only is there uncertainty. But there's just so much information there how do we discern between

Points to details on screen. Wordy – use red to highlights key points.

Graphs

Diagrams of complex problems with key components in bold circles and arrows to connect key components. Give example of key components. What does he mean by motivation in a complex problem? Facilitator spends more time on slide focused on anatomy of a complex problem. This elaborate on *5 W's and how*. He Explained the who, what, why, where, and how of a problem. Relate to middle school lesson on who, why, where, when, and how.

Review same information in another format. And connect to earlier problem he introduced.

Camera angle, lighting, mode or tone of room?

View of room from back.

Students sit and listen. Some responds to questions when prompted. Facilitators tend to stand in front of the room.

View of students in room: can see groups sitting at round tables, but not able to identify individuals.

Critical Messages:

No objective problem. Define problem first step, get the *5 W's and how*. Seek different perspectives. Examine available resources and situation. Stress the importance of understanding the problem from different perspectives.

General Observation

Interactions

Makeup or composition of audience: Not able to view much students

Information gain that would not be conveyed by a written source? Gender, ethnicity, comfort of everyone participating. How facilitator uses PowerPoint: lots of information, but then to review and repeat prior info in different format.

Students sit and listen. Some responds to questions when prompted. Facilitators tend to stand in front of the room. Questions at the end were from male participants one had prior course work on topic. Students went up to take pictures with presenter. Topic seem more complex.