DISSERTATION

EFFECTS OF UNDERGRADUATE LEADERSHIP EXPERIENCES ON LEADERSHIP

EFFICACY

Submitted by

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ABSTRACT

EFFECTS OF UNDERGRADUATE LEADERSHIP EXPERIENCES ON LEADERSHIP

EFFICACY

This dissertation addressed the research problem burdening higher education to better

prepare students with leadership they can effectively apply in complex organizational

environments during a time of rising costs for education and competing interests for

programmatic funding. This context coupled with high costs for corporate training to generate

performance improvements and increased spending on leadership development during a

recognized crisis in organizational leadership in the U.S. increased pressure on employers to hire

college graduates who can enter the workforce with demonstrated leadership capacity.

To address the research problem, the purpose of this non-experimental research study

explored the relationships between leadership experiences on leadership efficacy by comparing

strength of associations and differences in undergraduate students at Colorado State University

through a secondary analysis of data collected during the Multi-Institutional Study of Leadership

in 2006, 2009, and 2012. The research design and rationale included between-groups mixed

factorial design using independent samples *t*-tests, factorial analysis, and regression analysis as

the inferential statistics for data analysis and exploration of how the independent variable –

leadership experiences – might predict the dependent variable – *leadership efficacy*.

Target population for this study was undergraduate students enrolled at Colorado State

University's main campus. As part of the Multi-Institutional Study of Leadership in 2006, 2009,

and 2012, two sampled populations were drawn from the undergraduate population each year,

which included 1) a random sampled population up to 4,000 participants, and 2) a purposefully sampled comparative population identified from rosters of campus leadership experiences.

Results of statistical analysis indicated high internal consistency reliability for leadership efficacy data with a 0.88 Cronbach's coefficient alpha. Assumptions of independence, normality, and linearity were met. Principal component factor analysis supported construct validity of the data used to create the MSL leadership efficacy scales with 73% of the total variance explained by only one component.

Results of independent t-tests indicated higher average leadership efficacy scores for students reporting *yes* to having leadership experience while in college ($M_{difference} = 0.27, p<.001$), but the effect of the significance was small ($d = 0.23$). There was no statistical significance reported for the interaction between leadership experience and the year the MSL survey was administered on predicting leadership efficacy, $F(2,3223) = 1.09$, $p = 0.34$, partial eta$^2 = 0.001$.

Results of the multiple regression analysis indicated that *short-term* and *long-term* leadership experiences had a statistically significant effect on predicting higher average scores for *leadership efficacy* at a 99% confidence interval. *Leadership courses* also had a positive effect also on predicting higher average *leadership efficacy* scores at a 95% confidence interval. The combination of experiences was also statistically significant ($p <.001$), but the effect was estimated as small with an adjust R squared value of .02.

Because the statistical effects were small, minimal conclusions were drawn as to the differences between types of leadership experiences or if there were differences between survey years on leadership efficacy for undergraduates at this institution. In addition, because of the small effect size, no conclusion were made to the effect leadership experiences have on predicting leadership efficacy or which type of leadership experience has greater effect on

predicting leadership efficacy. It was not concluded that leadership opportunities on college campuses should not be supported because there was statistical significance to support differences and effects, but given the small effect, results were inconclusive.

The MSL survey instrument changed between years of data collection, which caused limitations to this study. To the benefit of future studies, the MSL instrument asked questions in the format that now captures more robust data about student participation in leadership experiences during college that can be better explored in future studies.

Given the definition of leadership efficacy and magnitude of leadership-related tasks, does the leadership efficacy scale represent the extent to which undergraduates could build leadership capacity through varying levels and types of leadership education offered in college? Future research studies could examine theory of self-efficacy to create a more robust leadership efficacy scale that accounts for differences among populations and varying ways in which students internally see their leadership capabilities. Such research could support the continued call to educators to conduct research on student leadership development and models used in practice to ensure participants reach intended outcomes.

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CHAPTER 1: INTRODUCTION

Leadership has been rated among the top four major threats to world stability right next

to nuclear or biological catastrophes, world-wide pandemics, and tribalism because "without

exemplary leadership, solving the problems stemming from the [other] 3 threats will be

impossible" (Bennis, 2007, p. 2). The Enron crisis was a tragic example of such a threat to world

stability when *bad leadership* lost investors and pensioners over $80 billion U.S. dollars – not

including unquantifiable impacts on thousands of employees through everything from job loss to

change in quality of life to those who might have taken their own lives (Bennis, 2007). Because

organizational life cycles have relied on leadership skills as crucial for establishment and

survival (Wang, 2013), leadership can no longer exist as an individual phenomenon or be

practiced without consideration of institutional context or impact on people (Avolio, 2007).

The Problem

Organizations spent an estimated $164 billion U.S. dollars on training and development

in 2012 according to the State of the Industry (Miller, 2012) with evidence supporting positive

returns on investments provided resources existed to support such efforts (Avolio, Avey, &

Quisenberry, 2010). However, one study reported only 20% of costs spent on training

transferred to on-the-job results and only an estimated 10% of that training impacting job

performance (Gilpin-Jackson & Bushe, 2007). Nevertheless, as U.S. businesses have recovered

from the most recent economic downturn, leadership development spending increased an average

14% from 2012 to 2013 with the largest jump seen at 23% in small sized companies (O'Leonard

& Krider, 2014). Furthermore, given environmental uncertainties and growing competition

globally, learning organizations used more strategic and innovative forms of leadership (Aslan,

Diken, & Sendogdu, 2011) for training and development, yet *leadership* remained a major human capital concern (Schwartz, Bersin, & Pelster, 2014).

Leadership development, higher education and *human resource development* have long been linked by leadership and management practices (Rost, 1993; Swanson & Holton, 2009). This was evidenced through leadership development efforts in connection to classroom curriculum (Stech, 2008; Northouse, 2012). Research designed to understand effective leadership development must keep pace with ever changing, rapidly evolving, and global environments for which educators and trainers were expected to navigate (Conger, 2013). Members of the Higher Education Research Institute demonstrated their ability to keep pace arguing "effective leadership is based on collective action, shared power, and a passionate commitment to social justice" (Higher Education Research Institute [HERI], 1996, p. 11). In efforts to prepare college students, they conceptualized socially responsible leadership (Tyree, 1998). Many institutions of higher education followed suit aiming to shape leadership for current times (Astin & Astin, 2000) with socially responsible leadership central to their missions (Zimmerman-Oster & Burkhardt, 1999) and leadership programs increasingly appeared on college campus in the late 1990's (Komives, Longerbeam, Owen, Mainella, & Osteen, 2006).

Institutional expenditures on programs and services for leadership development have shown a positive influence on the development of college student leadership capacity (Smart, Ethington, Riggs, & Thompson, 2002). Furthermore, professional organizations such as the Center for Creative Leadership, International Leadership Association, and National Clearinghouse for Leadership Programs, supported leadership outcomes and functions on college campuses (Amey, 2006). However, rising costs of higher education forced justification of

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programs outside core curriculum (Snyder & Dillow, 2013), which pressured college administrators even more to demonstrate evidence of outcomes (Goertzen, 2009).

With rising financial investments needed to generate performance improvements (Sung & Choi, 2014) and a leadership crisis in organizations (Bennis, 2007; Eich, 2008) employers needed college graduates who to enter the workforce demonstrating leadership capacity (Stech, 2008) – higher education was pressure to demonstrate leadership development programs build capacity for college students to lead in complex organizational environments (Conger, 2013).

Problem Statement

The problem statement that formed the basis of this research study can be summarized as:

High costs for corporate training to generate performance improvements and increased spending on leadership development coupled with a recognized crisis of leadership has increased pressure on employers to hire college graduates who can enter the workforce with demonstrated leadership capacity. This context burdened higher education to prepare students with effective leadership they can apply in complex organizational environments.

Significance of the Problem

Educators have been urged to critically evaluate programs to better link responsible forms of leadership with leadership outcomes that prepared college graduates to enter the workforce (Higham, Freathy, & Wegerif, 2010). Insignificant research existed to address differences between groups of undergraduate students to understand which types of leadership programs contributed to specific leadership developmental gains or what changed within groups over time (Dugan, 2006a). As a result, the Multi-Institutional Study of Leadership [MSL] emerged to examine college student experiences and higher education influences on college student leadership development and related outcomes (Dugan & Komives, 2007; MSL, 2014).

Formalized undergraduate leadership programs were reported to have a direct influence on leadership development outcomes related to self-development, multi-cultural awareness, and civic responsibility (Cress, Astin, Zimmerman-Oster, & Burkhardt, 2001). Additionally, undergraduates were reported to reach higher learning outcomes compared to peers on campuses without formal programs (Zimmerman-Oster & Burkardt, 1999), but these studies were more than a decade old from when college student leadership development programs increasingly appeared on college campuses (Komives, Longerbeam, Owen, Mainella, & Osteen, 2006).

In two more recently published articles, research attempted to address the research problem by exploring influences of leadership program participation (Dugan, Bohle, Gebhardt, Hofert, Wilk & Cooney, 2012) and the role of college student leadership on leadership capacity (Haber & Komives, 2009). However, neither of these studies directly addressed the research problem what types of leadership programs contributed to specific leadership developmental gains or what influenced leadership development over time as suggested by Dugan (2006b).

This study made significant contributions to both scholarship and practice. First, this study contributed to the body of empirical research supporting the higher education's initial efforts to effectively prepare college students to enter the workforce as actively engaged citizen leaders (HERI, 1996). Secondly, this study contributed to the body of information needed by administrators and faculty of leadership education to make informed program and financial decisions given competing interests for programmatic funding (Busteed, 2014; Snyder & Dillow, 2013). Thirdly, although empirical studies explored various influences on students' capacity for socially responsible leadership using data collected through the Multi-Institutional Study of Leadership (MSL, 2014), this study filled a gap in the literature by differentiated from previous studies to examine effects over time (Dugan, 2006a).

Purpose of the Study

The purpose of this non-experimental research study explored the relationships between leadership experiences on leadership efficacy by comparing strength of associations and differences in undergraduate students at Colorado State University through a secondary analysis of data collected during the Multi-Institutional Study of Leadership in 2006, 2009, and 2012.

Research Design and Rationale

The study used between-groups mixed-factorial design using independent samples *t*-tests, factorial analysis, and regression analysis as the inferential statistics for data analysis. These statistical tests were chosen to explore differences in average *leadership efficacy* scores and effect of *leadership experiences* in predicting *leadership efficacy* (Leech, Barrett, & Morgan, 2014). The independent and dependent variables were identified through measurements in the MSL survey (MSL, 2014), which included *higher education influences* by varying type and duration of *leadership training or education* (e.g., leadership conferences, retreats, workshops, and courses or certificate programs were categorized as short-term, long-term, and leadership courses) and *leadership efficacy* scores. The data gathered through the MSL study provided a unique opportunity to examine differences between undergraduate students (J. Dugan, personal communication, 4/21/14) and contributed to leadership education at Colorado State University through the following research questions.

Research Question

R1: Was there a difference in average leadership efficacy scores between undergraduates with leadership experiences and no leadership experiences overtime?

R2: What were the effects of leadership experiences on leadership efficacy scores?

    R2a: What were the effects of short-term experiences on leadership efficacy?

    R2b: What were the effects of long-term experiences on leadership efficacy?

    R2c: What were the effects of leadership courses on leadership efficacy?

Definition of Key Terms

Scholars and practitioners debated definitions of leadership for more than a century failing to agree on a universal meaning with as many as 65 different classification systems developed in the past six decades (Northouse, 2012). Conflict and contradiction between authors contributed to the lack of consensus (Bennis, 1959) forcing authors to categorize theoretical explanations of leadership into general approaches including: trait, behavioral, situational, power-influence, and transformational (Brungardt, 1996) or to summarize definitions by identifying the distinction between leadership and management (Field, 2002).

Given the scope and purpose of this study, a contemporary definition of leadership informed this study, which emerged from the *post-industrial leadership paradigm* (Rost, 1993) predicated on *assumption*s that leadership necessitated transformational or values-driven, process-oriented approaches (Bass, 1985; Burns, 1978).

The following definitions of key terms emerged as necessary and relevant to this study because they supported contemporary theories and models found within the *post-industrial leadership paradigm* (Rost, 1993).

Post-Industrial Leadership Paradigm was defined as "an influence relationship among leaders and followers who intend real changes that reflect their mutual purpose" (Rost, 1993, p. 102).

Leadership development was defined as "engaging with learning opportunities in one's environment over time to build one's capacity or efficacy to engage in leadership" (Komives, Longerbeam, Owen, Mainella, & Osteen, 2006, p. 402).

Leadership identity was defined as the "central category developed over six identity stages [whereby] developing-self interacted with group influences to shape the student's

changing view of self with others" (Komives, Owen, Longerbeam, Mainella, & Osteen, 2005, p. 606).

Leadership efficacy (LSE) was defined as "one's internal belief in the likelihood that they will be successful when engaging in leadership" (Dugan & Correia, 2014, p. 25).

Socially responsible leadership was defined as "the process of leadership" (Tyree, 1998, p. 19) that evolved from the description of "collaborative relationships that lead to collective action grounded in shared values of people who work together to effect positive change" (Tyree, 1998, p. 19 citing Astin et al., 1996, p. 17).

Transactional leader was defined as a person who "pursues a cost-benefit, economic exchange to meet subordinates' current material and psychic needs in return for 'contracted' services rendered by the subordinate" (Bass, 1985, p. 14).

Transformational leader was defined as a person who "attempt and succeed in elevating those influenced from a lower to a higher level of need according to Maslow [& Herzeberg]'s (1954) hierarchy of needs" (Bass, 1985, p. 14).

Conclusion

In the past 20 years since the emergence of leadership development programs on college campuses, researchers have taken strides to evaluate and offer recommendations for improving leadership development on college campuses (Komives, Dugan, Owen, Slack & Wagner, 2011; Dugan, Bohle, Gebhardt, Hofert, Wilk, & Cooney, 2011; Dugan & Komives, 2010; Dugan & Komives, 2007; Lindsay, Foster, Jackson, & Hassan, 2009; Posner, 2009). However, when leadership development programs were emerging in the early 1990's, research did not adequately address the link between leadership development programs and educational outcomes (Brungardt, 1996). Furthermore, no study was found to examine data collected in multiple

iterations of the Multi-Institutional Study of Leadership to understand changes across variables, over time as a means to inform research and practice towards *higher education leadership development* aimed at preparing college students to enter the workforce more active, engaged citizen leaders.

With a crisis in leadership (Bennis, 2007; Eich, 2008), billions of dollars spent annually by U.S. organizations to train employees (Aguinis & Kraiger, 2009; Grossman & Salas, 2011), and increased spending on leadership development (*O'Leonard & Krider, 2014),* a major challenge has emerged for learning organizations to employ administrators and professionals with the best fitting leadership for the environment (Rohs, 2002). Additionally, the critical emphasis of effective leadership development within organizations (Avolio, Avey, & Quisenberry, 2010) increased pressure on employers to hire individuals who demonstrated leadership capacity such as college graduates entering the workforce (Stech, 2008).

To address the problem, educators need to critically evaluate programs to better link responsible forms of leadership with leadership outcomes that prepare college graduates to enter the workforce (Higham, Freathy, & Wegerif, 2010). Additionally, identified gaps between college student leadership development and models used in practice (Dugan, 2006a) emphasized the need for research on practice in order to ensure participants reach intended learning outcomes (Goertzen, 2009). Furthermore, educational research gives practicing educators new ideas, suggests improvements to practice, and informs policy debates through evaluative approaches (Creswell, 2008). If using appropriate methods as suggested by Creswell (2008) and Gliner, Morgan & Leech (2009), educational research can support the design of leadership development for college students, generate new ideas for curriculum, add to leadership development methods used in practice, and inform policy decisions related to resource allocation or staffing structures.

As such, this study was designed to serve as a model for how other college administrators can study leadership development programs over time.

This chapter served as an introduction and context to this problem. Chapter 2 further explored how l*eadership* and *higher education* have long been linked to *human resource development* through an integrative literature review.

CHAPTER 2: INTEGRATIVE LITERATURE REVIEW

Literature contributing to the knowledge base within scholarly research related to *leadership* appeared in abundance. For example, at a Research I University in the Midwest, 100 journals were accessible containing *leadership* in the title ("CSU-Libraries", 2014). Likewise, a subject search for the word *leadership* in databases such as "Academic Search Premier" (2014), "Business Source Complete" (2014), "ERIC" (2014), "LexisNexis Academic" (2014) and "Web of Science" (2014) recovered between 20 and 50 thousand results each. "Google Scholar" provided equally overwhelming results when over 2.5 million leadership hits appeared – over 15 thousand of which were published since 2014 and over 33 thousand since 2013 (2014).

Moderately more focused on *leadership training*, *leadership development*, or *leadership education* over 2 million results independently appeared. Attempting to focus on *contemporary leadership theory*, a search yielded 1.7 million results. Even specific theories – such as *transformational leadership theory, collaborative leadership theory, or the social-change model of leadership* – yielded upwards of 450 thousand results, each averaging 7 thousand publications since 2014 and 17 thousand since 2013 (2014). Popular culture and mainstream media were seemingly as saturated with *leadership.* For example, a search for *leadership best sellers* within the "New York Times" (2014) yielded over 6,000 hits with more than 700 titles identified in the past 12 months alone. In June 2014, "Amazon" marketed 55 *leadership books* and the "Internet Movie Database" featured 77 *leadership* tiles in film, television, and documentaries.

The Problem

After identifying the abundance of research, print, and media available to anyone with access to the internet, the question emerged – what was the relevant literature to examine to

better understand *leadership*? To review the extent of literature on this popular and broad ranged topic proved exhaustive without a means to synthesize the knowledge base in existence. As a way to synthesize the literature within the vast knowledge base, Torraco (2005) provided guidelines for writing an integrative literature review guiding this review of the literature.

Preliminary examination of the literature demonstrated organizations used more strategic and innovative forms of leadership because of environmental uncertainty and growing competition globally (Aslan, Diken, & Sendogdu, 2011). Literature also demonstrated that leaders and followers working together transformed their organizations (Watt, 2009). The literature highlighted organizational life cycles relied on leadership skills as crucial for establishment, development, and survival (Wang, 2013) with transformational leadership behaviors positively impacting a wide range of individual and organizational outcomes ranging across military, industry, business, the public sector and education (Hardy, Arthur, Jones, Shariff, Munnoch, Isaacs, & Allsopp, 2010).

Within higher education, literature suggested, as students graduate from higher education institutions to enter the work force, they increasingly needed to demonstrate leadership (Stech, 2008) and leadership education prepared students for employment and life after college (Osteen & Coburn, 2012). However, these reports came with criticism that contemporary models used by educators too often over simplified the complexity of applied leadership (Conger, 2013).

Problem Statement

The problem was high costs for corporate training to generate performance improvements (Sung & Choi, 2014) and increased spending on leadership development (O'Leonard & Krider, 2014) coupled with a crisis of leadership (Bennis, 2007; Eich, 2008) has increased pressure on employers to hire college graduates who can enter the workforce with

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demonstrated leadership capacity (Stech, 2008) burdening higher education to prepare students with effective leadership they can apply in complex organizational contexts (Conger, 2013).

However, insignificant research existed addressing differences between groups of undergraduate students to understand which types of leadership programs contributed to specific leadership developmental gains or what changed within groups over time (Dugan, 2006a; Dugan, 2006b). To address the problem, it became apparent more research was needed to examine what occurred within leadership education over time and across variables aimed at developing college students to graduate with capacity as socially responsible leaders (Dugan & Komives, 2007; Higher Education Research Institute [HERI], 1996).

Purpose Statement for this Integrative Literature Review

To address the problem through an integrative review of the literature, the purpose of this chapter synthesized scholarly literature on *contemporary leadership* utilized in *college student leadership development* towards generating new understanding for *human resource development* by examining the emergence and assumptions of the areas through theory, research, and practice.

Methodology for this Integrative Literature Review

Torraco (2005) provided methodology to analyze and critique scholarly literature into an integrative literature review. For example, integrative literature reviews demonstrated sophisticated research by identifying a topic within the literature that justifiably needed review, and then analyzed and critiqued the literature to create new understanding (Torraco, 2005).

Limitations

This integrative literature review was designed to address a contemporary understanding of leadership development that has informed programs for college student leadership development that emerged in the 1980's and later. As such, this chapter did not provide a history

of leadership definitions or leadership development. Several investigators have extensively

reviewed literature comparing leadership definitions to conceptualize leadership (e.g., Field,

2002; Rost, 1993), which was addressed through methodology, research approach and rationale.

Literature Research Approach and Rationale

First, this integrative literature review examined relevant past literature reviews on

leadership topics, and what emerged was the post-industrial leadership paradigm (Rost, 1993)

including assumptions within the paradigm and models of leadership development associated

with the paradigm. The variance between industrial and post-industrial leadership paradigm

(Rost, 1993) set the stage for this review and a framework to explore *contemporary leadership*.

Second, multiple theoretical models were identified within the post-industrial leadership

paradigm, and the *Social Change Model of Leadership Development* (Higher Education Research

Institute, 1996) was identified as the theoretical perspective for both this integrative literature

review and overarching dissertation for this research study because of the influence and use of

the model within higher education *student leadership development* over the past 25 years.

Lastly, *human resource development* aimed to improve human expertise to improve

organizational performance (Swanson & Holton, 2009) and emerged into a billion dollar industry

within the United States (Miller, 2012). Discoveries about group processes and the role of

leadership development among interventions and strategies for *organizational development* have

led research to question the cost of training on performance (Gilpin-Jackson & Bushe, 2007).

Past Literature Reviews on Leadership Development

Several researchers conducted extensive reviews of the literature to date with variable

findings and contributions. For example, Stogdill (1974) organized a resource book for

practitioners on published research findings, theories, and surveys. Brungardt (1996) found

several contradictions in the literature on leadership development. Day (2001) highlighted a movement towards the application of leadership in the context of an environment differentiating between *leader development* and *leadership development.* Bass and Bass (2009) generated resources for leadership educators. Van De Valk & Constas (2011) found a growing body of interest around the social aspects of leadership and researchers' interest in relationships between leader effectiveness and social capital to improve leadership development programs. Most recently, Dinh, Lord, Gardner, Meuser, Linden, and Hu (2014), overviewed trends and developments within diverse leadership theories since the start of the new millennium by conducting a qualitative review of scholarly research in 10 academic peer-reviewed journals.

The most relevant review of leadership literature found during this inquiry was conducted by Rost (1993), which extensively reviewed leadership studies and definitions throughout the twentieth century. In his review, Rost (1993) recognized differing assumptions within the underlying values and behaviors within theoretical definitions of leadership – this earmarked a paradigm shift and launched a contemporary conceptualization of leadership.

The next section defined contemporary leadership the emergence of the post-industrial leadership paradigm and the assumptions that inform vary theories and models used in practice.

Contemporary Leadership

Scholars and practitioners have debated definitions of leadership for more than a century failing to agree on a universal meaning with as many as 65 different classification systems developed in the past six decades (Northouse, 2012). The debate has gone on continuously with some authors questioning if leadership exists (Fiedler, 1996). Conflict and contradiction between authors contributed to lack of consensus (Bennis, 1959) forging authors to categorize theoretical explanations of leadership into general approaches such as trait, behavioral,

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situational, power-influence, and transformational (Brungardt, 1996). Definitions were

summarized by differences between leadership and management (Field, 2002) in Table 2.1.

Table 2.1

Differences between Leaders and Managers by Author and Focus (Field, 2002).

Author(s)	Focus	Leaders	Managers
Bennis & Nanus (1985)	Conceptual	do the right things people as great assets commitment outcomes what and why things could be done sharing information networks	do things right people as liabilities control rules how things should be done compliance secrecy formal authority (hierarchy)
Czarniawska-Joerges & Wolff (1991)	Conceptual	Symbolic performance, expressing the hope of control over destiny	Introducing order by coordinating flows of things and people toward collective action
Spreitzer & Quinn (1996)	Conceptual	Transformational	Transactional
Zaleznik (1977, 1992)	Practical	Energize the system, their working environment is often chaotic	Ensure the stability of the system
McConkey (1989)	Practical	Provide proper conditions for people to manage self.	Concerned with controlling conditions and others.
McConnell (1994)	Practical	Vision, inspiration, courage, human relationships, profound knowledge.	Allocate resources, design work methods, create procedures, set objectives and create priorities.
Buhler (1995)	Practical	Give people purpose, push the boundaries, need vision and ability to articulate it.	Accomplish work through others, follow the rules, rely on legitimate power.
Sanborn (1996)	Practical	Create change, ensure others embrace it. The word lead means to go from – leaders tend to take their followers from one place to another.	Change when they have to. The word *manage* means to handle.
Fagiano (1997)	Practical	Help others do the things they know need to be done to achieve a common vision.	Get things done through other people.
Sharma (1997)	Practical	Innovation	Conformity
Maccoby (2000)	Practical	Leadership is a relationship – selecting, motivating, coaching, building trust.	Management is a function – planning, budgeting, evaluating, facilitating.

Contemporary Leadership Defined

Building off the work of Burns (1978) and Bass (1985), Rost (1993) recognized the shift in leadership theories situated as transactional to transformational providing a conceptualization of leadership theory frequently referred to as *contemporary leadership*. The conceptualization of *leadership as a process*, involving *influence* through *groups working towards a common goal* (Northouse, 2012) supported by *transformational leadership theory* (Bass, 1991; Bass & Riggio, 2005) emerged from the *post-industrial leadership paradigm (Rost, 1993)* and defined *contemporary leadership*.

Emergence of Post-Industrial Leadership Paradigm

The emergence of a *post-industrial leadership paradigm* highlighted a shift in perspectives and assumptions imbedded in leadership theories throughout the 20th century (Rost, 1993). Through an in-depth examination of leadership studies as an emerging discipline across organizations and communities, Rost (1993) identified how varying leadership theories impacted leader and follower interactions within the context and examination of transactional and transformational leadership. Rost (1993) recognized leadership from the industrial age as transactional in nature and focused on management principals or productivity (i.e., leadership that used cost-benefit to gain results from followers) as compared to leadership used in the post-industrial age as transformational, which focused on people, group processes, and values to accomplish outcomes (i.e., leadership that pushed followers to higher level needs in order to engage the higher self).

More specifically, Rost (1993) coined the term *post-industrial leadership paradigm* from the time in history when popular leadership theories of the 1960s through 1980s encompassed an understanding of human needs, motivations, and behavior differently than those of the industrial-

age. During those decades, theorists capitalized on Maslow and Herzeberg's (1954) *hierarchy of needs* as a contributor to organizational theories and how human behavior by an individual at work guided management principles exemplified through McGregor's (1960) *theory X and theory Y* or Hollander's (1978) *social exchange theory of leadership*. Moreover, the ideology and practice of leadership rested on a new perspective and emerging value proposition defining *leadership as a process* rather than individuals holding power, positions, or authority in organizations (Bennis, 1959).

Assumptions of Post-Industrial Leadership Paradigm

Theoretical models and conceptual definitions of leadership associated with the post-industrial leadership paradigm assumed both transformative and collaborative approaches (Rost, 1993) supported by literature shifting leadership to a reciprocal and inherently relational process Komives, Lucas, & McMahon, 2009). Bennis (1959), in original research contributing to the post-industrial leadership paradigm shift, emphasized that leadership can be taught and does not come from born traits or characteristics. Moreover, Brungardt (1996) claimed that the "transformational approach emphasizes the leader's role in creating of culture and revitalization of organizations" (p. 82). The Higher Education Research Institute (1996) asserted collaborative leadership assumed leadership should effect change for others and society; leadership was a collaborative process not a position held; leadership should be values based. In essences, the underlying *assumptions of contemporary models of leadership* favored purposeful, collaborative approaches towards positive change based on common values (Wagner, 2007).

Theories and Models in Post-Industrial Leadership

Several theories and models linked with the post-industrial leadership paradigm were found in the literature as examples that fit the post-industrial leadership paradigm given

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timeframe and assumptions conceptualizing transformative and collaborative approaches with reciprocal or relational processes that contribute to the intended leadership outcomes.

Authentic leadership. *Authentic leadership* encouraged "on going processes whereby leaders and followers gain self-awareness and establish open, transparent, trusting, and genuine relationships" (Avolio & Gardner, 2005, p. 322).

Charismatic leadership. *Charismatic leadership* emphasized personality and behaviors by leadership on followers to generate social change (Fiol, Harris, & House, 1999) and was originally attributed to Weber (1947) for advancing the theory.

Ethical leadership. *Ethical leadership* defined as "the demonstration of normatively appropriate conduct through personal actions and interpersonal relationships, and the promotion of such conduct to followers through two-way communication, reinforcement, and decision-making" (Brown, Treviño, & Harrison, 2005, p. 120).

Multicultural leadership. *Multicultural leadership* fostered an inclusive approach and philosophy of leadership that incorporated the influences, practices and values of diverse cultures in a respectful and productive manner (Bordas, 2007). Multicultural assumed when people respect one another and value difference, they work together more amicably, which results in greater productivity encouraging synergy, innovation and resourcefulness (Bordas, 2007).

Relational leadership. *Relational leadership* described leadership as a process of people coming together to attempt to accomplish change or make a difference to benefit the common-good (Komives, Lucas, & McMahon, 2009). Relational leadership articulated that leadership focused on relationships and was inherently relational. Most leadership happened contextually with interaction between individuals and among group members striving to reach a common goal (Komives, Lucas, & McMahon, 2009).

Servant leadership. In *servant leadership* (Greenleaf, 1970; 1998), the motivation of the leader was to serve. This type of leadership took the typical hierarchy of leadership and inverted it (Greenleaf, 1970). Leaders aimed to coach, facilitate growth and new learning, and supported followers. The servant-leader assumed the role of a servant first to encourage others' development and assumed natural feelings to serve with a conscious choice to lead, contrary to finding leadership through a position (Greenleaf, 1998).

Situational leadership theory. *Situational leadership theory* referred to interaction between a leader's level of task directed behavior and a follower's preparedness to complete the task while accounting for the emotional support given by the leader to the follower to complete the task (Hersey, Blanchard, & Natemeyer, 1979). The theory emerged as a redesign of the leadership effectiveness model (Hersey & Blanchard, 1977) which bridged organizational development concepts with leadership frameworks to conceptualize leader behaviors in relationship to subordinates' understanding of task management (Graeff, 1983).

Socially responsible leadership theory. *Socially responsible leadership theory* conceptualized leadership as a purposeful, collaborative, and a values-based process for the common good of communities and society or to effect positive transformations within society (Higher Education Research Institute, 1996; Wagner, 2007). Informed by scholarly research and practice, student services administrators on college campuses recognized benefits to student learning through personal developmental stages during the college years (Astin, 1993; Roberts, 2007; Osteen & Coburn, 2012), which motivated administrators to create a leadership development model specifically designed for college students aimed at developing *socially responsible leadership* (Tyree, 1998).

Spiritual leadership. *Spiritual leadership was* defined as "comprising the values, attitudes, and behaviors that are necessary to intrinsically motivate one's self and others so that they have a sense of spiritual survival through calling and membership" (Fry, 2003, p. 711).

Transformational leadership. *Transformational leaders* "attempt and succeed in elevating those influenced from a lower to a higher level of need according to Maslow's (1954) hierarchy of needs" (Bass, 1985, p. 14). Transformational leadership "occurs when leaders broaden and elevate the interest of their employees, when they generate awareness and acceptance of the purposes and mission of the group, and when they stir their employees to look beyond their own self-interest for the good of the group. (Bass, 1991, p. 21)

Women's ways of leadership. *Women's ways of leadership* included an attention to the process instead of the outcome (Helgesen, 1990). In this model, there was a willingness to look at how an action affected other people instead of a focus on personal interests; and there is a large concern for the wider needs of the community; women's ways of leading included an appreciation of diversity and assumed intuitive decision-making (Helgesen, 1990).

Contemporary Leadership Summarized

To summarize thus far, *contemporary leadership* emerged from the *post-industrial leadership paradigm* (Rost, 1993) predicated on *assumption*s that leadership necessitated transformational or values-driven, process-oriented approaches (Bass, 1985; Burns, 1978) operationalized through *theories and models* supporting relational and reciprocal leadership (Komives, Lucas, & McMahon, 2009) demonstrated by examples like multi-cultural leadership (Bordas, 2013) and socially responsible leadership (Higher Education Research Institute, 1996).

Leadership Development in Higher Education

Contemporary leadership, situated in the *post-industrial leadership paradigm*, influenced *higher education* to extend *leadership development* beyond schools of business or management into inter- and multi-disciplinary approaches resulting in increased numbers of curricular and co-curricular experiences beginning in the 1980's (Komives, Longerbeam, Owen, Mainella, & Osteen, 2006). A focus on building student leadership capacity contributed to student learning (Osteen & Coburn, 2012) with leadership education recognized as a critical component of higher education (Eich, 2008) and institutional mission statements reflected this commitment to leadership development (Osteen & Coburn, 2012; Zimmerman-Oster & Burkardt, 1999).

However, contemporary leadership theories tended towards a conceptualization of how individuals functioned or succeeded in organizations and work environments; they were not directly established to train college students (Dugan, Komives, & Segar, 2008). Informed by scholarly research and practice, student services administrators on college campuses recognized the benefits to student learning through the personal developmental stages that took place during the college years (Astin, 1993; Roberts, 2007; Osteen & Coburn, 2012).

College Student Leadership Development Defined

Motivated to create a leadership development model specifically designed for college students, an ensemble mobilized with the support of a grant from the U.S. Department of Education (Tyree, 1998), and from their work, a college student leadership development model emerged – *the social change model for leadership development* – connecting leadership development to social responsibility (Higher Education Research Institute, 1996). Since the inception of this model, many collegiate environments defined *college student leadership development* as leadership programs that encouraged student involvement supported by

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exploration of values and identity to promote active, informed citizenship (Dugan & Komives, 2010; Komives & Wagner, 2012; Wagner, 2007).

Emergence of College Student Leadership Development

A convergence of factors over the last several decades contributed to the emergence of college student leadership development (Dugan & Komives, 2007) and substantial growth in the number of leadership education programs (Lindsay, Foster, Jackson, & Hassan, 2009). Contributing factors included claims of a crisis in leadership (Bennis, 2007; Eich, 2008) and the insistence that higher education institutions develop the next generation of transformative leaders who can solve pressing social problems (Astin & Astin, 2000). Simultaneously, scholars and practitioners have debated whether leadership could be taught (Brungardt, 1996; Cronin, 1984) questioning the links between leadership development and student outcomes (Robinson, Lloyd, & Rowe, 2008).

Student affairs practitioners, often responsible for implementing leadership development models, have recognized the need to question assumptions that inform practice in order to meet the needs of a changing demographic of college students (Kezar & Moriarty, 2000; Komives, Dugan, Owen, Slack, & Wagner, 2011). Moreover, there existed a major challenge facing learning organizations to employ administrators and professionals with the best fitting leadership for the environment, which increased the need for leadership development programs (Rohs, 2002).

With the convergence of influences, higher education moved to establish comprehensive academic leadership studies – with the University of Richmond offering the first undergraduate degree in leadership in 1992 (Brungardt, 1996) – resulting in variety of differences in program structures ranging from curricular to co-curricular models (Haber, 2011). Both academic and co-

curricular programs to develop student leadership increasingly appeared on college campuses (Komives, Longerbeam, Owen, Mainella, & Osteen, 2006). Wanting to meet institutional goals, programs seemingly positioned leadership education towards collaborative processes for effective, positive social change versus training towards power or authority one can hold for positional leadership (Zimmerman-Oster & Burkardt, 1999).

This emergence did not come without expectations. Educators of leadership courses were asked to conduct assessment to ensure participants in leadership courses reached the intended learning outcomes (Goertzen, 2009) as well as urged to design programs that linked responsible forms of leadership with high quality training and development (Higham, Freathy, & Wegerif, 2010). The response brought rise to organizations like the *Council for the Advancement of Standards in Higher Education (CAS)* promoting guidelines for student learning and development outcomes, and included rating scales for benchmarking student leadership programs (Council for the Advancement of Standards, 2009).

Assumptions about College Student Leadership Development

On-going emphasis on leadership development and how to train effective leaders has caused much debate in terms of teaching and learning (Brungardt, 1996). Brungardt (1996) argued leadership development theory focused on leadership development over a lifetime with both natural influences and adult experiences as compared to learning leadership theory, which more narrowly examined the role education plays in the leadership development process. Furthermore, epistemological views of leadership contributed to the debate among teaching and learning because underlying assumptions about the way in which leadership existed contributed to understanding if leadership can be taught (Billberry, 2009). For example, can one come to know leadership as reality or was leadership perceived by those who follow, and therefore

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constructed from meaning placed on the actions and behaviors of someone demonstrating leadership (Billberry, 2009).

Some research supported the ideology that leadership can be taught when focusing on leadership as a process rather than positional or traits inherent in individuals (Higher Education Research Institute, 1996). However, contradictions existed within the literature in the 1990s when leadership development programs were taking root with critiques that leadership was a fad juxtaposed accolades that leadership was grounded in theory with strong scientific backgrounds (Brungardt, 1996).

Thinking and learning. Rooted in the studies of political leadership, Cronin (1984) advised Universities, among other entities, how to bolster leadership development by teasing out ten myths and barriers impeding the assumptions about leadership, writing "…thinking about or defining leadership is a kind of intellectual leadership challenge in itself." (p. 22).

Context matters. Zimmerman-Oster and Burkardt (1999) argued context matters providing an executive summary of 31 projects focused on college leadership development funded between 1990 and 1998 by the W.K. Kellogg Foundation. Zimmerman-Oster and Burkardt (1999) urged higher education to advance leadership training due to a perceived public crisis of leadership within the nation.

How college affects students. Decades of research existed on how college affected students measuring for a variety of impacts ranging from involvement to community service to gender and racial identity (Pascarella & Terenzini, 2005). Much of the research suggested students develop significantly during college years in five areas including "identity formation, self-concept and self-esteem, autonomy and locus of control, interpersonal relations and leadership skills, and general personal development" (p.261) with comprehensive evidence that

indicated "students make statistically significant freshman- to senior-year gains in leadership abilities, popularity, and social self-confidence" (p. 263).

Inevitably, the epistemological debates about leadership as a phenomenon, higher education as a context for student development, and the research on how college affects students led to several *assumptions about college student leadership development.* The foundation of many college student leadership development programs rested on beliefs that education and training programs supported growth in leadership skills and knowledge of leadership theory (Cress, Astin, Zimmerman-Oster, & Burkhardt, 2001) with many practitioners assuming comprehensive leadership education contributed to rates of retention and graduation, and elevated campus recognition and accomplishments by building students' talents to contribute to their academic fields and the world (Osteen & Coburn, 2012).

Theories and Models in College Student Leadership Development

Although higher education, at times, lacked clear direction on how best to design programs to meet the diverse institutional missions and cultures across institutions (Osteen & Coburn, 2012) leadership education became a desired outcome and "…scholars and practitioners are developing, teaching, and shaping the field of leadership education." (p. 11). Irrespective to the contradictions and debates, literature presented an abundance of theories, models, and behaviors for developing college student leadership that ranged from leader-centric models to relational models to links between cognitive development and identity development (e.g., Baxter-Magolda, 1998; Bennis, 2003, Chickering & Reisser, 1993; King & Kitchener, 1994; Kouzes & Posner, 2007; Perry, 1981). Examples of theories and models used in college student leadership development are presented in the section that follows:

Experiential learning theory. *Experiential Learning Theory* defined learning as "the process whereby knowledge is created through transformation of experience" (Kolb, 1984, p.38). The *Experiential Learning Model* (see Figure 2) demonstrated a method by which individuals can actively engage in learning by moving through a cycle of concrete experiences, into observations & reflections, formation of abstract concepts & generalizations, and then testing the implications of concepts in new situation.

Theory of involvement. Rooted in classic learning theory, psychoanalysis, and longitudinal studies to understand college persistence, Astin (1984) developed the *Theory of Involvement* defined as "the amount of physical and psychological energy that the student devotes to the academic experience" (p. 298). The theory conceptualized involvement as a measurable outcome with both qualitative and quantitative elements whereby student learning and personal development were measurably proportionate to quality and quantity of student involvement in a given collegiate program, activity or experience (Astin, 1984).

Leadership identity model. *Leadership Identity Development* (LID) model outlined a stage-based model of leadership identity development (Komives, Longerbeam, Owen, Mainella, & Osteen, 2006) built on the intersections between student development theory and relational leadership; the model defined leadership development as "engaging with learning opportunities in one's environment over time to build one's capacity or efficacy to engage in leadership" (Komives et al., 2006, p. 402).

Social change model for leadership development. The *Social Change Model for Leadership Development* was established for the dual purpose of 1) increasing student learning and development for greater self-knowledge towards leadership competence, and 2) building individual leadership capacity to contribute positively towards social change (Tyree, 1998). The

research group conceptualized social responsibility through identifying leadership as a process

towards creating positive change. The Higher Education Research Institute [HERI] established

the model in 1996 by identifying values inherent in individuals, groups, and society functioning

dynamically in a leadership process for positive change (Dugan, 2006a; Tyree, 1998; Wagner,

2007). Figure 1 below depicted the model. Each of the eight core values, including change, was

defined by the HERI (1996) and Tyree (1998) in the doctoral dissertation that established an

instrument to measure the conceptual frames. See Appendix I for definitions.
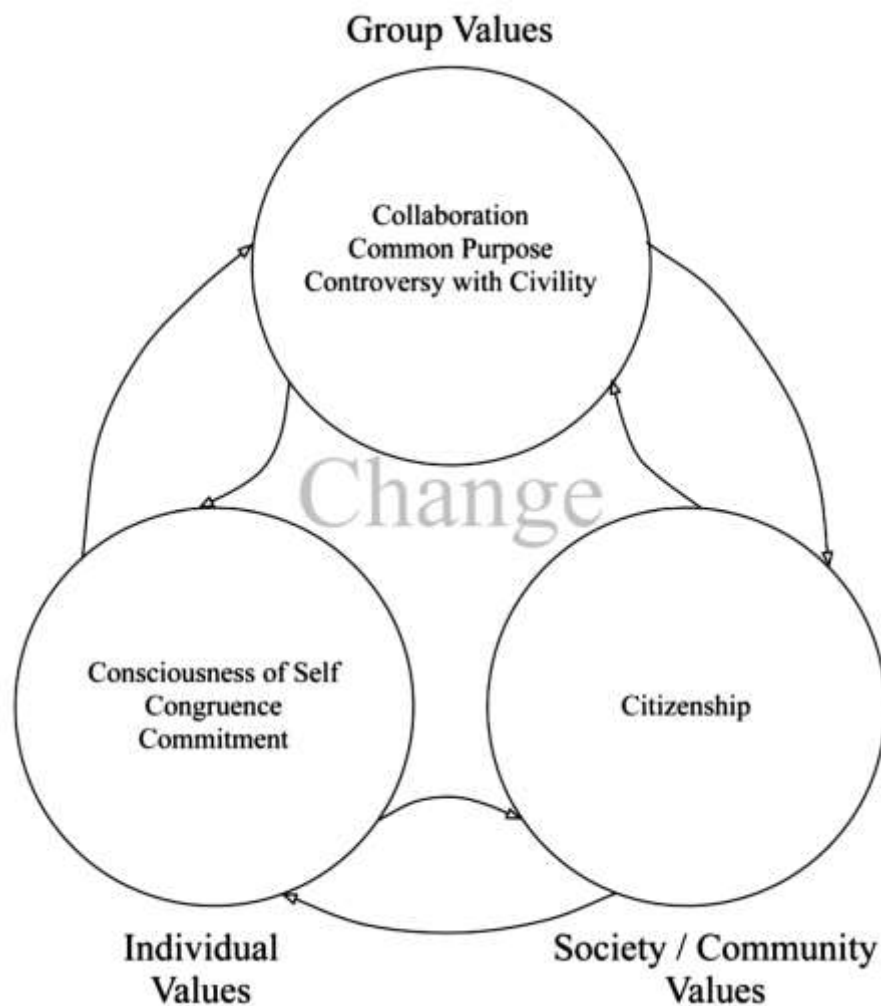
Figure 1: Social Change Model of Leadership Development (HERI, 1996; Tyree, 1998)

Socially responsibility leadership scale. *The Social Responsibility Leadership Scale* was an instrument designed to measure socially responsible leadership for college students when research minimally existed to operationalize the *Social Change Model* (Tyree, 1998). The Social Change Model, measured by the *Socially Responsible Leadership Scale* (SRLS) was used as the original theoretical framework for the Multi-Institutional Study of Leadership ("Multi-Institutional Study of Leadership", 2014).

Multi-Institutional Study of Leadership. The *Multi-Institutional Study of Leadership* (MSL) has evolved beyond the *Social Change Model of Leadership Development* (HERI, 1996) and measures solely based on the *Socially Responsible Leadership Scale* (Tyree, 1998) to encompass a wider theoretical base given increased complexity of the study ("Multi-Institutional Study of Leadership", 2014). The MSL draws from multiple conceptual frameworks and models for leadership related outcomes nesting the original intent of the study including an adapted version of the *Input-Environment-Outcome (I-E-O)* college impact model (Astin, 1993) and the core values of the *Social Change Model* (HERI, 1996; Tyree, 1998). The evolved version of the MSL now draws upon common elements found in *contemporary leadership theory, social psychology & human development,* and *critical & justice-based perspectives* ("Multi-Institutional Study of Leadership", 2014).

The models presented in this section represented theoretical models used in *college student leadership development* across the United States. For example, in 2014, Colorado State University offered a variety of leadership development experiences including academic courses for students to explore interpersonal, social, and global dimensions of leadership (President's Leadership Program, 2014) or engage in small-group transformational experiences, which aimed

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to develop socially responsible minded leaders (Student Leadership, Involvement, & Community Engagement, 2014).

Similarly, there existed 12 post-secondary academic institutions across the state of Colorado who also have committed to integrating leadership development into their programs and course offerings, many of which infused experiential learning theory and the social changed model of leadership development. Together, these institutions have formed a unique alliance that serves as a model for integrating resources and sharing best practices for teaching and developing leadership (Colorado Leadership Alliance, 2014; Denver Metro Chamber Leadership Foundation, 2014).

Previous Research on College Student Leadership Development

There existed a variety of research on student leadership development ranging from how informal interactions with faculty positively correlated with educational aspirations of college commuter freshmen (Iverson, Pascarella, &Terenzini, 1984) to research that supported brining candor into the classroom because frankness and honesty are needed both in today's businesses and organizations, and to model vulnerability necessary for learning (Galpin & Whittington, 2009).   With *college student leadership development* defined as formal leadership training programs that encouraged student involvement supported by exploration of values and identity to promote active, informed citizenship (Komives & Wagner, 2012; Wagner, 2007) and develop socially responsible leadership (Dugan & Komives, 2010), the research reviewed under this section focused on convergent ideas and influences shaping college student leadership development.

Research for leadership outcomes. Dugan and Komives (2007) urged outcomes assessment of leadership programs through a report that examined select data from 52

participating institutions and 63,000 completed surveys from a 165,000 student sample with an approximate 37% return rate. The final sample for analysis included 50,378 with some over sampling of various populations reported. Overall findings demonstrated leadership outcomes with change over time and reporting that demographics, student involvement, formal leadership programs, and service all matter in influencing student leadership.

Research on leadership identity. To better understand leadership development as a process, a grounded theory study was conducted to comprehend the stages of development a person goes through to build a leadership identity (Komives, Owen, Longerbeam, Mainella, & Osteen, 2005). Komives et al. (2005) argued little was known at the time of their study about how a leadership identity was formed so the study used a grounded theory methodology to understand what a person experienced through developing a leadership identity. Participants were college students who demonstrated relational leadership effectively and widely varied across demographic characteristics (i.e. race, gender, sexual orientation, age, major, religious beliefs). Data was collected through a series of interviews with the 13 participants by a team of five white women. The study revealed a "dynamic process of developing a leadership identity" (p. 596) at differing ages and means by which to come to one's own understanding of self as a leader developing over six identity stages. The authors reported leadership identity developed as individuals shift from a "hierarchical, leadership centric view" (p. 609) to a "collaborative, relational process" (p. 609) and argued more research was needed to "determine how post college adults experience the *integration/synthesis* stage of leadership identity and whether there are additional stages not reflected in this theory" (p. 610).

Komives et al. (2006) built off their prior grounded theory study to integrate the categories of the grounded theory into a *Leadership Identity Development (LID) model* by

linking cognitive and psychosocial development theories with relational leadership. The model

highlighted six stages, the influences on each stage of development, and the transitions between

stages (Komives et al., 2006). The authors argued the model was not linear, but rather cyclical

and attempted to shift the conceptual model into an applicable model to help leadership

educators applicably work with students to move across the stages by designing relevant

programs/learning experiences for students and groups based on where students were in their

own leadership identity development. The article provided recommendations for practice

including assessment, advising and mentoring, and group relevance. Ultimately, the authors

argue the LID model "provides a framework with applicability to designing educational

programs and other learning experiences to foster leadership identity" (p. 417).

Research on social change model. Dugan and Komives (2010) explored influences on

college students' capacities to engage in socially responsible leadership. The research questioned

to what extend do experiences in the college environment predict capacity across the constructs

in the *social change model for leadership development* and does efficacy for leadership

contribute to a student's outcome measure? Student's self-report data was analyzed using

hierarchical multiple regressions with significant relationships reported in leadership training and

implicated that the "variance explained by experiences in the college environment suggests

ample opportunities for higher education to influence students' development" (p.538).

Social change model and gender. Dugan (2006a) found significant differences in

leadership development between college women and men, and stated women benefited from the

post-industrial leadership paradigm because of the emphasis on skills stereotypically associated

with female roles such as relationship building, focus on process, and ethics of care. The results

also implicated inconsistency between men and women's appreciation versus actual participation

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in three of the eight constructs making the study relevant for student affairs professionals in shaping pragmatic designs using the social change model (Dugan, 2006a).

  Social change and spirituality. Gehrke (2008) examined the connection between spirituality and contemporary leadership with spiritually being viewed as finding meaning and purpose in life. The study examined the relationship between spirituality and leadership in college students using a correlation research design. The study examined three measures of spiritual levels association with the eight constructs of the social change model comparing measures of spirituality and leadership. The strongest relationships were found with the equanimity scale, which refers to "an ability to find meaning in hardships, feeling at peach or centered, and experiencing a strong bond to humanity" (p. 352), and the spiritual quest scales, which encompasses purpose of life through "a desire to form a meaningful philosophy of life, and a search to uncover the mysteries of human life and existence" (p. 352). The relevance of the study was its contribution to empirical literature on spirituality and leadership, and by arguing for a culture that searched for leaders with "a deeper understanding of themselves and the processes by which they make meaning of the world around them" (p. 358).

  Research on impact of leadership education. A qualitative study was conducted to assess the impact of leadership education at a Midwestern university (Coers, Lorensen, & Anderson, 2009). One research question within the study asked if participation in a curricular leadership course had an impact on students' perceptions as it related to course content focused on leadership in groups and teams. The study concluded there was a positive impact on individual's perception of group or team work following the course (Coers et al., 2009).

  Gaps in literature. Dugan (2006b) presented one of the first empirical studies conducted on the *social change model of leadership development* to inform programmatic design

and concluded with a need for programmatic focus on assisting students in connecting values to group and individual behaviors, and increased values based leadership for men.

Dugan (2006b) argued a gap existed between college student leadership and models utilized in practice. The study was descriptive and found significant difference between involved and uninvolved students defined by four types of student involvement: community services, positional leadership role, student organization membership, and formal leadership training. Dugan (2006b) stated the study endorsed the importance of college student involvement and was useful for programmatic design.

Haber and Komives (2009) studied gaps in current literature and examined experiences that contribute to students' individual dimensions of leadership development by examining what independently and collectively contributed to individual outcomes of socially responsible leadership. Haber and Komives (2009) found leadership training and education programs were not significant predictors of the model's outcomes and urged more critical examination of the components and learning outcomes within leadership programs.

Dugan, Komives, and Segar (2008) reviewed literature specific to student demographics and leadership programs and explained gaps in the literature in relationship to the values of demographic characteristics as a value of diversity and multiculturalism in higher education and student affairs practices. The study was exploratory with the purpose of addressing problems outlined through the literature review and deepened the understanding of college student leadership development needed in the US.

Leadership Development in Higher Education Summarized

To summarize thus far, *leadership development in Higher Education* that encouraged student involvement and exploration of values and identity to promote active, informed

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citizenship (Komives & Wagner, 2012) *emerged* as *college student leadership development* to advance student learning (Dugan & Komives, 2007). This was predicated on *assumption*s that quality and quantity of involvement were measurable (Astin, 1984) and positively impacted institutional missions or outcomes such as student success and retention (Osteen & Coburn, 2012). This context motivated scholars and practitioners to conceptualize a model for *social change leadership development* (Higher Education Research Institute, 1996) leading to *research* on leadership for social responsibility (Dugan, Bohle, Gebhardt, Hofert, Wilk, & Cooney, 2011).

Human Resource Development

Leadership and *higher education* have long been linked to the phenomena of *human resource development* demonstrated by leadership and management practices (Rost, 1993; Swanson & Holton, 2009) and evidenced through leadership training and education in connection to classroom curriculum (Stech, 2008; Northouse, 2012). Despite leadership still being viewed as positional, there existed a growing momentum to effectively build leadership capacity of senior administrators and groups to improve employee performance and increase organizational effectiveness (Braun, Nazlic, Silke, Pawlowska, Peus, & Frey, 2009) demonstrated by *interventions* and *strategies* for *organizational development*. For example, building emotional intelligence as a form of leadership has been viewed as a critical resource to organizations guiding individuals about how to navigate the complexity of relationships (Goleman, Boyatzis, & McKee, 2004). Similarly, integrating women's ways of leading helped organizations understand how the quality and value of relationships, education, and passion served as an organizational resource (Coughlin, Wingard, & Hollihan, 2011).

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Human Resource Development Defined

As a phenomenon, *human resource development* encapsulated components of training and development and organizational development for the purpose of performance improvement seen through various applications and contexts (Swanson & Holton, 2009). Scholars and practitioners have generated a plethora of theory, research and practice related to areas subcutaneous to the field of human resource development– such as *leadership and strategy, workforce development,* and *change management* – each filled a rich evolution of applications and interventions for developing workplace expertise and advancing organizations (e.g., Cummings & Worley, 2014; Swanson & Holton, 2009; Werner & DeSimone, 2011).

Despite numerous definitions (see Swanson & Holton, 2009) among practitioners, *human resource development* was best defined in the literature as "a process of developing and unleashing expertise for the purpose of improving individual, team, work process, and organizational system performance" (Swanson & Holton, 2009, p. 4) because of the fit with addressing the identified problem within this inquiry aimed to address the crisis of leadership within organizations (Eich, 2008) by developing college student leadership capacity (Dugan & Komives, 2007; Higher Education Research Institute, 1996) for application in navigating leadership complexities (Conger, 2013). This definition of *human resource development* interrelated economics (i.e., value), psychology (i.e., people and behaviors), and systems (i.e., environment and context) providing a framework by which to understand and improve individuals, performance, and processes in organizations (Swanson & Holton, 2009).

Emergence of Organizational Development

According to Swanson and Holton (2009), *human resource development* linked back to the evolution of humans as far as the origins of hunters and gathers who used human learning as

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a means of survival. Making the distinction between contemporary training efforts seen during the industrial revolution of World War II in the United States, Swanson and Holton (2009) provided an in-depth history of human resource development, not replicated here. However, the *emergence of organizational development* through *discoveries about group processes* and *role of leadership development* became critically relevant from the timeline of *human resource development* for this literature review. Just as Abraham Maslow (1954) and Douglas McGregor (1960) contributed to changing perspectives leading to *contemporary leadership*, their work – alongside other humanistic theorist and social scientists – contributed to emergence of *organizational development* generated by *discoveries about group process* and the *role of leadership development* that shifted management to new perspectives towards meaningful work and worker motivation (Swanson & Holton, 2009).

Discoveries about group process. Laboratory training, also known as T-groups, led by Kurt Lewin, contributed significantly to the emerging elements of *organizational development* within the field of *human resource development* through discoveries about group process and launching participatory learning models for modern training concepts (Cummings & Worley, 2014). As a result, practitioners and professional have taken on significant roles as trainers and consultants responsible for providing interventions that contribute to human resource development working to ensure individuals perform effectively (Werner & DeSimone, 2011).

Role of leadership development. Despite confusion and complexity that existed among theorists about leadership theory at the time, leadership development has played a role in contributing to administrative behavior (Bennis, 1959). Literature suggested that management and leadership development in the United States were intricately intertwined with both private sector and higher education making systematic and informal contributions to *contemporary*

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human resource development (Swanson & Holton, 2009). Management practices based on Frederick Taylor's *Principles of Scientific Management* drove actions of managers and leaders in the early 1900s (Rost, 1993; Swanson & Holton, 2009).

However, just as shifts in thinking moved concepts of leadership from transactional to transformational approaches (Rost, 1993), *leadership development* – coupled with new understanding of worker behaviors learned from the now famous Hawthorne effect – shaped *organizational development* forging new assumptions about human behaviors and value of human relations (Swanson & Holton, 2009). As a result, literature suggested *leadership development has played a role in organizational development* with formal leadership training argued to enhance leadership performance, and found in business education and public administration (Solansky, 2010).

Assumptions about Human Resource Development

With the *emergence* of *organizational development* within the field of *human resource development* a set of *assumptions* termed by Swanson and Holton (2009) as core beliefs emerged as well. Swanson and Holton described organizations as "human-made entities that rely on human expertise to establish and achieve their goals" (p. 10). As a result, these authors believed that organizations change, experience vulnerabilities, develop and maximize expertise through processes over time, and have a host of tools at their disposal that can – and should – be used ethically and responsibly to advance people, groups, and process throughout organizations (Swanson & Holton, 2009). Based on these *assumptions,* a wide-range of *interventions and strategies* were developed for improving performance and guided professional action (Madsen, Tunheim, & Burnham, 2012).

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In the literature, *interventions and strategies* were shared among researchers and practitioners at professional venues such as the Academy of Human Resource Development to offer experiential activities and exercises for practitioners to use with adult learners for the purpose of developing knowledge and competencies through team leadership (Madsen et al., 2012) which continually advanced the work of William James, John Dewy, Kurt Lewin, Carl Rogers, and Paulo Freire (Kolb & Kolb, 2009) bridging and building upon descriptive adult learning models (Hopkinson & Hogg, 2004 as cited by Madsen et al., 2012).

Interventions and Strategies within Human Resource Development

Interventions and strategies for *human resource development* existed within the literature in abundance evidenced by arguments that successful leadership programs must be grounded in a course set of values and beliefs transparent to audiences and a means of influencing others (Stech, 2008). For example, modeled through Kolb's (1984) experiential learning theory, the best opportunity for professional growth in *leadership* came when individuals were stretched through challenging tasks or experiences and supported in their learning to create meaning from those experiences (Kouzes & Posner, 2007). Literature also supported interventions that engaged concepts of social change with a willingness to challenge the status quo operationalizing Lewin's (1951) social sciences model with concepts breaking, moving, re-aligning – also known as, unfreeze, change or move, refreeze in organizational development – strengthened organizational strategies for change (Fiol, Harris, & House, 1999).

Strategic management interventions and strategies. Other examples of *interventions and strategies* within *organizational development,* included ways in which *strategic management* conceptualized visioning processes to ensure organizational longevity (Schwartz, 1991) and gave voice to the complexity of organizational planning (Minzberg, Ahlstrand, & Lampel, 2005).

Literature provided ideas about value proposition, value driven operation models, and discipline

to critically examine why some market leaders succeeded while other businesses failed through a

lack of understanding their consumers, environment, ignoring/letting quality slip, and change

(Treacy & Wiersema, 1995).

Workforce development interventions and strategies. *Workforce development* focused

on designing *interventions and strategies* through performance improvement plans, designing

job descriptions, and analyzing measures by which to better link learning and assessment

(Dychtwald, Erickson, & Morison, 2013; Swanson, 2007).

Organizational change interventions and strategies. Within *organizational*

development, the study of *organizational change* yielded models and frame work that guided

consultants on responsible relationship building and strategies for navigating organizational

politics (e.g., Beitler, 2006; Burke, 2008; Quinn & Cameron, 2011; Gilley & Gilley, 2003;

Gilley, Quatro, Hoekstra, Whittle, & Maycunich, 2001) or analyze organizational performance to

generate interventions at varying levels and context (e.g.: Burke-Litwin, 1992; Rummler &

Brache, 1990). Some authors argued for methodical, step oriented processes for generating

change (e.g., Gilley & Gilley, 2003; Kotter, 1996) whereas other authors argued for systems to

self-organize around change (Olson & Eoyang, 2001).

Previous Research Relevant in Organizational Development

Regardless of variation among *intervention and strategies,* billions of dollars were spent

annually in the United States on training and development in the last several years with the

amount continually rising (Aguinis & Kraiger, 2009; Grossman & Salas, 2011) arguably

supporting *assumptions* about *human resource development* that performance improvements

happened through corporate training expenditures and financial support for education (Sung &

Choi, 2014). In 2012 alone, the State of the Industry report for workplace learning estimated

$164 billion US Dollars were spent on employee training and development (Miller, 2012).

However, research also suggested only 20% of costs spent on training transferred to on-the-job

results and only about 10% of training impacted job performance (Gilpin-Jackson & Bushe,

2007). Implementation of training can be challenging (Solansky, 2010) and should be realistic,

practical, and provide opportunity for growth while providing new skills and experiences

(Messmer, 2003) especially given leadership skills were crucial for organizational life cycles

including establishment, development, and survival (Wang, 2013).

Leadership through social capital vital to organizational development. Day (2001)

also posited social capital as vital to leadership development because it brought out a group's

efforts to achieve in contrast to a leader's individual skills and attributes. The elements of social

capital, such as mutual trust, respect, shared representation and collective meaning among groups

helped groups effectively achieve common goals, shared visions, and organizational culture.

Additionally, Van De Valk and Constas (2011) conducted an empirical methodological review

that linked leadership development programs and social capital. Hawley, Romain, Rempel, Orr,

and Molgaard (2012) argued public health workforce challenges demanded social capital or more

specifically "partnerships leading to shared goals" (p. 671) and gave rise to leadership training

programs such as the Kansas Public Health Leadership Institute.

Leadership through emotional intelligence. Gardner (1985), known as the founder of

multiple intelligences, examined the phenomenon of effective leadership through a critical

review of nationally and internationally known individuals and presented a framework for

examining leadership through cognitive and human developmental models for understanding the

phenomenon of leadership. "Our understanding of the nature and processes of leadership is most

likely to be enhanced as we come to understand better the arena in which leadership necessarily occurs – namely the human mind" (Gardner, 1995, p. 15). Gardner's work has undergone multiple renditions and applications including a reframing of multiple intelligences (Gardner, 1999; Gardner, 2011) and profiles for use with college athletic training (Kutz, Dyer, & Campbell, 2013).

Authors Goleman, Boyatzis, and McKee (2004) stated, "The fundamental task of leaders…is to prime good feelings in those they lead. [This] occurs when a leader creates resonance – a reservoir of positivity that frees the best in people" (p. ix). Goleman et al., (2004) asserted leaders should act in accordance with how others will feel in order to extract or bring out the best in others and therefore, learning to lead with emotional intelligence was critical to navigating organizational environments.

Transformational leadership in organizations. Transformational leadership emerged as one of the most popular approaches to understanding leadership effectiveness in the past two decades with perceptions and meaning making from one's job rather than perceptions of the identified leader or self as a proposed new explanation for the effects of transformational leadership (Piccolo & Colquitt, 2006). For example, daily influences of transformational leadership, contingent reward, active management by exception on followers' work engagement was studied with 61 naval cadets who completed diary questionnaires for 34 days (Breevaart, Bakker, Hetland, Demerouti, Olsen, & Espevik, 2014). Breevaart et al. (2014) used multilevel regression analysis and reported participants were more engaged on days that leaders showed more transformational leadership and provided contingent rewards. Breevaart et al. (2014) argued leaders' daily behavior influenced worker engagement and environment daily.

Hardy, Arthur, Jones, Shariff, Munnoch, Isaacs, and Allsopp (2010) argued that transformational leadership behaviors showed a positive impact on a wide range of individual and organizational outcomes ranging from military to business to public sector to education. Hardy et al. (2010) also argued the majority of research has been correlational with few experimental designs. Measures of transformational leadership behaviors included the Multifactor Leadership Questionnaire (Avolio, Bass, & Jung, 1999), Charismatic Leadership Scale (House, 1996), and the Transformational Leadership Inventory (Podsakoff, MacKenzie, Moorman, & Fetter, 1990).

Leadership training programs for workforce development. Straus, Soobiah, and Levinson (2013) reported leadership training programs prepared individuals for advancing academic rank, position, and publication have modest effects on academic medical center outcomes. Straus et al. (2013) reviewed studies and reported the highest quality leadership training programs positively impact academic rank (48% compared to 21%, p = .005), positional leadership (30% compared to 9%, p = .008) and higher rates of publications (3.5 compared to 2.1 per year, p < .001) when comparing participants and non-participants.

Human Resource Development Summarized

To summarize thus far, *human resource development* aimed to improve human expertise to improve organizational performance through various applications and contexts (Swanson & Holton, 2009). This *emerged* through discoveries about group processes and the role of leadership in *organizational development* (Cummings & Worley, 2014) based on *assumptions* that *interventions and strategies* were developed to improve performance (Madsen et al., 2012) with US billions spent annually on training and development (Miller, 2012; Sung & Choi, 2014) despite *research* questioning a justifiably impact performance (Gilpin-Jackson & Bushe, 2007).

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Conclusion

"The field of leadership studies frequently focuses on the leader to the exclusion of other equally important components of the leadership process" (Avolio, 2007, p. 25), so this review of the literature examined research and theoretical models for the purpose of informing the identified problem within this inquiry – the problem aimed to address the crisis of leadership within organizations (Eich, 2008) by developing college student leadership capacity (Dugan & Komives, 2007; Higher Education Research Institute, 1996) for navigating leadership complexities that exist in organizations (Conger, 2013). This integrative literature review analyzed and critiqued scholarly literature on *contemporary leadership* defined by the *post-industrial leadership paradigm* (Rost, 1993) in connection to *college student leadership development* for social change (HERI, 1996; Komives et al., 2005) and *human resource development* that uses interventions and strategies to improve organizational performance (Swanson & Holton, 2009) utilizing an integrative literature review methodology suggested by Tarraco (2005).

Through analysis and synthesis of the literature, this chapter revealed the emergence of the post-industrial leadership paradigm, which made leadership concepts and ideas accessible to more than the powerful elite who hold high ranking positions within organizations, but rather grasped *leadership as a process* to include *multiple and diverse perspectives* (Dinh, Lord, Gardner, Meuser, Lidne, & Hu, 2014). This was also evidenced by the saturation of popular books and best-sellers like *The Leadership Challenge* (Kouzes & Posner, 2007), *Primal Leadership (*Goleman, Boyatzis, & McKee, 2004), *Lean In: Women, Work, and the Will to Lead* (Sandberg, 2013), and *Strengths Based Leadership: Great Leaders, Teams, and Why People*

Follow (Rath & Conchie, 2009), each of which focused on interventions and strategies to put leadership theories in practice within organizations to drive change.

Because organizations have been expected to achieve high performance through methods of leadership that build on creative influence and collective action (Kim & Mauborgne, 2003), modern business and industry have urged organizational transformation and leadership through leaving a legacy towards something bigger than one's self (Christensen, 2013) and billions of US dollars have been spent annually on training and development to drive employee performance towards achieving these high expectations (Miller, 2012).

Research and practice have led scholars and practitioners to argue that leadership needed collective responsibility throughout an organization to create change and increased diversity are inevitable within college campuses has shaped these views (Kuk, Banning, & Amey, 2010). However, finding consensus on the best theoretical model of leadership has changed many professions (Augustyniak, 2014) coupled with the rise in education and development of socially just leaders within educational leadership roles (Pazey & Cole, 2013) and links between leadership and individual well-being in organizations (Kelloway & Barling, 2010), it is not surprising a major challenge for learning organizations has been the ability to train administrators and professionals with the best fitting leadership competencies emerging and greater need for leadership development program (Rohs, 2002).

Through this integrative literature review, leadership development was found as multi-faceted in nature, meaning varying circumstances impacted how one develops leadership and can be considered through conceptual context, practice or application of leadership context, and research context (Day, 2001). As such, several definitions of leadership development existed. For example, leadership development involved building capacity for groups of people to learn

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their way out of problems that could not have been predicted (Dixon, 1993) or that arise from

disintegration of traditional organizational structures and the associated loss of sense making

(Weick, 1993). Others defined leadership development as "expanding the collective capacity of

organization members to engage effectively in leadership roles and processes" (McCauley,

Moxley, & Van Veslor, 1998).

Ultimately, leadership involved dynamic, complex elements ranging from personal

competencies to situational factors to group interactions and was among the most scrutinized

constructs with an abundance of research, theoretical models, and conflicting ideologies

(Augustyniak, 2014). "The only person who practices leadership alone in a room is the

psychotic" (Bennis, 2007, p. 3) and others agree leadership was not an individual phenomenon

(Avolio, 2007). Therefore, urgency existed in the literature to not lose sight of the context of

leadership and the very real impacts leadership can have on people and organizations when

shifting from the academic or conceptual realm to the application and practice of leadership

(Bennis, 2007).

CHAPTER 3: METHODOLOGY

A noted organizational leadership crisis recognized in the past decade (Avolio, 2007; Bennis, 2007; Eich, 2008) has drawn attention to a major human capital concern (Schwartz, Bersin, & Pelster, 2014). The concern has increased organizational spending on leadership development (O'Leonard & Krider, 2014) and increased investments to improve workplace performance (Miller, 2013; Sung & Choi, 2014). This context, coupled with current news headlines stating rising concerns and competing interests for programmatic funding on college campuses (Busteed, 2014) urged leadership educators to make more informed financial, policy, and program decisions (Snyder & Dillow, 2013). With higher education charged to develop students' capacity to lead in complex organizational contexts and urgency to demonstrate program predictability (Conger, 2013), an ongoing problem persisted in higher education to develop new generations who positively contribute to society (Astin, 1996; Cress, Astin, Zimmerman-Oster, & Burkhardt, 2001). This problem cannot be addressed without linking leadership development efforts with intended learning outcomes (Goertzen, 2009; Higham, Freathy, & Wegerif, 2010). Based on this problem, the purpose of this research study emerged.

Purpose of the Study

The purpose of this non-experimental research study explored the relationships between leadership experiences on leadership efficacy by comparing strength of associations and differences in undergraduate students at Colorado State University through a secondary analysis of data collected during the Multi-Institutional Study of Leadership in 2006, 2009, and 2012.

This chapter outlined methodology to address the research problem including the general research design and rationale that informed 1) the research questions, 2) population and sample, 3) instruments and measurement, 4) data collection, and 5) data analysis strategies.

General Research Design Classification

The general research design classification was identified as between-groups mixed-factorial design using independent samples *t*-tests, factorial analysis, and regression analysis as the statistical tests recommended by Leech, Barrett, & Morgan (2014). The independent and dependent variables were measurements used in the Multi-Institutional Study of Leadership (MSL) survey (MSL, 2014). The independent variable measured one *higher education influence* by varying type of *leadership training or education* (e.g., short- or long-term and leadership courses). The dependent variable, *leadership efficacy,* measured an outcome interval. Table 3.1 summarized the research design.

Table 3.1

Research Design (adapted from Leech, Barrett, & Morgan, 2014)

MSL Year	Independent Variable	Dependent Variable

2006	Leadership Experience (yes/no)
	    Short-term experiences
	    Long-term experiences
	    Leadership courses
		Leadership Efficacy

2009	Leadership Experience (yes/no)
	    Short-term experiences
	    Long-term experiences
	    Leadership courses
		Leadership Efficacy

2012	Leadership Experience (yes/no)
	    Short-term experiences
	    Long-term experiences
	    Leadership course
		Leadership Efficacy

Research Rationale

The between-group mixed-factorial research design permitted exploration of differences between the three different groups and strengths of associations between the variables for predictive purposes (Leech, Barrett, & Morgan, 2014). Mixed-design allowed for exploration of level of significance in prediction of the independent variable on the dependent variable. For example, between-group mixed factorial design permitted exploration of difference in leadership efficacy scores within the samples based on attributes such as type of leadership experiences (e.g., short-term, long-term, or leadership courses). Furthermore, the cross-sectional design of the MSL study provided a unique opportunity to track changes, across variables to inform higher education leadership development (J. Dugan, personal communication, 4/21/14).

<div align="center">

Research Questions

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The following research questions emerged from the design and rationale of this study:

R1: Was there a difference in average leadership efficacy scores for undergraduates with leadership experiences and no leadership experiences at Colorado State University as measured by the Multi-Institutional Study of Leadership in 2006, 2009, and 2012?

R2: What were the effects of leadership experiences on leadership efficacy scores at Colorado State University as measured by the Multi-Institutional Study of Leadership in 2006, 2009, and 2012?

R2a: What were the effects of short-term leadership experiences on leadership efficacy?

R2b: What were the effects of long-term leadership experiences on leadership efficacy?

R2c: What were the effects of leadership courses on leadership efficacy?

Population and Sample

The target population for this study was identified as undergraduate students enrolled at Colorado State University (CSU) main campus. Founded as Colorado Agricultural College in 1870, CSU was established as a land-grant institution under the Morril Act of 1862 and since classified a Carnegie Research University (CSU-FactBook, 2014). The University main campus exists in a midsize city of approximately 150,000 at the foothills of the Rocky Mountains and listed undergraduate tuition, fees, and housing at $9,313 for in-state residents and $25,166 for non-residents in 2013-2014 (CSU-FactBook, 2014). Given the historical context, the mission of CSU stated a commitment to excellence, setting the standard for public research universities, and benefitting citizens of Colorado, United States, and beyond (CSU-Board of Governors, 2010).

As part of the Multi-Institutional Study of Leadership (MSL) in 2006, 2009, and 2012, two sampled populations were drawn from the target: 1) a random sampled population of up to 4,000 participants, and 2) a comparative sampled population. The comparative sample was identified purposefully from rosters leadership experiences on campus (see Appendix II for a list and description). Table 3.2 summarized population, sample sizes, and response rates each year.

Table 3.2

Population, Sample, and Response Rate by Year (Institutional Research, 2014; MSL, 2006-2012)

	2006	2009	2012
Target Population	20,720	20,829	22,300
Sampled	3,744	4,345	4,684
Sample Size	1,064	1,036	1,240
Response Rate	28.4%	23.8%	26.5%

Both sampled populations were invited to complete an online survey via e-mail. Colorado State University and the Survey Sciences Group, LLC worked collaboratively to satisfy all Institutional Review Board (IRB) requirements and ensured anonymity of data (MSL, 2014). Using informed consent, both sampled populations were invited to opt-in to the research study. The sample was standardized at a 95% confidence interval with ± 3 margin of error (MSL Final Reports 2006, 2009, and 2012).

For the purpose making inferences from the samples used in this study's results to the target population studied, demographics on undergraduate enrollment was collected from CSU-Institutional Research. Data gathered included enrollment by gender, academic college, ethnicity, and state residency currently and corresponding semesters the MSL was administered.

Demographics were outlined in Table 3.3.

Table 3.3

CSU Undergraduate Student Demographics by Year (CSU-Institutional Research, 2014)

	2006	2009	2012	2014
Total enrollment	20,720	20,829	22,300	25,506
Gender				
Female	10,692	10,780	11,410	11,478
Male	10,028	10,049	10,890	11,028
Academic College				
Agricultural Sciences	1,267	1,222	1,299	1,362
Business	1,962	1,940	2,082	2,163
Engineering	1,405	1,523	1,866	2,285
Health/Human Sciences	3,790	4,188	4,147	4,202
Intra University	2,821	2,769	2,653	2,559
Liberal Arts	4,720	4,651	4,910	4,209
Natural Sciences	3,236	2,954	3,391	3,641
Veterinary/Biomedical Sciences	550	615	629	625
Natural Resources	969	967	1,323	1,460
Ethnicity				
Asian	601	636	384	526
Black	436	492	464	517
Hispanic/Latino	1, 254	1,336	1, 813	2,340
International	244	371	489	885
Native American	295	326	86	121
Native Hawaii/Pacific Island	--	--	38	--
White	17,125	16,585	17,247	16,603
Multi-Racial	--	--	34	637
Other	765	1,083	--	--
No Response	--	--	1,145	877
State residency				
Colorado Resident	17,057	17,137	18,699	17,406
Non-Colorado Resident	3,663	3,692	3,601	5,100

Instruments and Measurement

The Multi-Institutional Study of Leadership (MSL) questionnaire was specifically

designed for the MSL study to examine college student experiences and higher education

influences on college student leadership development and leadership-related outcomes (Dugan &

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Komives, 2007). The MSL questionnaire was derived from a revised version of the *Socially Responsible Leadership Scale* (Tyree, 1998), an instrument designed to measure outcomes of the eight constructs in *The Social Change Model of Leadership Development* (HERI, 1996).

According to the MSL Final Report in 2006, a pilot study for the MSL used an 83-item version of the SRLS revised by Appel-Silbaugh (2005) and was later revised to a 68-item version by John Dugan (MSL, 2006). In 2006, each construct included between 6 to 11 items where participants self-reported reposes to a survey questionnaire using a 5-point Likert scale ranging from strongly disagree (1) to strongly agree (5) (MSL, 2006). Appendix III and IV are the MSL survey instruments for 2006 and 2009 respectively; Appendix V shows changes made in 2012.

The *Social Change Model of Leadership Development* was well-known and utilized on college campuses at the time the study was created, and served as the theoretical model for the MSL questionnaire (MSL, 2006). To address limitations of self-report data, researchers combined conceptual framework of the *Inputs-Environments-Outcome (I-E-O) College Impact Model* by Astin (1993) to build the questionnaire. The *I-E-O* model allowed for examination of context while controlling for pre-collegiate experience and self-perception (MSL, 2006).

Conceptual Frame: Input-Environment-Outcomes College Impact Model

The MSL was adapted from the SRLS to measure core values or constructs related to socially responsible leadership (MSL, 2006; MSL, 2012; MSL, 2014). The original instrument used *input-environment-outcomes* (I-E-O) college impact model (Astin, 1991) to measure the constructs and numerically score leadership capacity. The *I-E-O* model allowed for researchers to "assess the impact of various environmental experiences by determining whether students grow or change differently under varying environmental conditions" (Astin, 1993, p. 7). Inputs were identified as variables related to student characteristics such as leadership prior to college.

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Environment was defined as variables related to students engagement in college. Outcomes were leadership related variables that aligned with the core values of the Social Change Model such as appreciation for diversity and efficacy for leadership (MSL, 2014).

Prior Reports on Validity and Reliability

The MSL study has been conducted nationally since 2006 and intended to inform practice by aligning the theory-research-practice cycle (MSL, 2014). More than 150 institutions, including Colorado State University, have participated. Furthermore, well-known, highly valued organizations within the field of higher education have contributed to the development of the national study including: The national Clearinghouse of Leadership Programs, Association of College Personnel Administration, National Association of Student Personnel Administrators, The University of Maryland, and LeaderShape (MSL , 2014). As a national study, samples included campuses throughout the United States, and individual campus results were compared to the national sample data each year for benchmarking.

Reliability. "Reliability refers to the degree to which an indicator is a consistent measuring device" (Sweet & Grace-Martin, 2008, p.9). The MSL was established through inter-item reliability tests, benchmarking measures, pilot studies, and on-going use of the instrument annually since 2006. Reliabilities for scales were outlined by the national study and provided in this report as Appendix VI. Measurement reliability was also examined during the 2006 study with Cronbach alphas calculated for participating campuses and by major student sub-populations, according to the MSL Full study findings that year. Scale reliabilities were reported for each campus through the national study with no deviation of Cronbach alpha beyond 0.12 (MSL, 2012). Internal reliability for the 68-item instrument in the MSL pilot study "ranged from .72 for controversy with civility to .87 for citizenship" (MSL, 2006, p. 10).

Validity. Measurement or instrument validity addresses the extent to which something measured what it intended to measure (Sweet & Grace-Martin, 2008). Investigation of instrument validity permits researchers to make inferences from instrument scores about a sample or population (Creswell, 2008). Some testament to the validity of the MSL comes from examining the stability and consistently reliable scores. The MSL was established through inter-item reliability tests, benchmarking measures, pilot studies, significant psychometric testing, and on-going use of the instrument since 2006 (Dugan, Fath, Howes, Lavelle, & Polanin, 2013).

Types of validity to consider include content, criterion-related, and construct validity (Creswell, 2008). For example, content validity considers the extent to which an instrument's questions and scores represent the range of possibilities, criterion-related considers if scores are good predictors of an outcome, and construct validity determines the purpose and use of those scores (Creswell, 2002). Psychometrics and design considerations were addressed through content validity of measures established in the Socially Responsible Leadership Scale creation and original design contributing to the Multi-Institutional Study of Leadership survey instrument (Tyree, 1998). Criterion-related validity in pilot studies and iterations since 2006 demonstrated appropriate and consistent relationships between outcomes and theoretical measures (MSL, 2014). Construct validity was examined in pilot studies and iterations since 2006 (MSL, 2014). Although data comes from students self-reporting, numerous research studies conducted show accuracy of self-reported data (Turrentine, 2001 in MSL Full Report Findings, 2012).

Data Collection

This study was a secondary analysis of data collected from participants at Colorado State University between February and April of 2006, 2009, and 2012 through the Multi-Institutional Study of Leadership. The data was made available through the institutional research officer

within the Division of Student Affairs at Colorado State University. Institutional Review Board

(IRB) for human subjects at Colorado State University granted approval for each year of the

original study. IRB approval for further use of the data during this study was obtained on

December 9, 2014 from the Research Integrity and Compliance Review Office at Colorado State

University to ensure protocol to protect and secure the data was followed.

The MSL was administered online by the Center for Student Studies (CSS) a division of

the Survey Sciences Group, LLC and all data were collected using empirically proven standards

for web–based survey research (MSL, 2014). Participants received email invitations with

instructions directing them to a website where they could opt to complete a 20 minute survey; the

first question requested participant consent.

Data Analysis

Exploratory data analysis provided descriptive statistics to highlight point-in-time

differences between groups in 2006, 2009, and 2012. Descriptive statistics were chosen for the

purpose of exploring differences and changes over time. For example, exploratory data analysis

demonstrated differences in *leadership efficacy* scores between undergraduates who responded

yes to having participated in a leadership training or education experience as compared to

undergraduates who responded *no*. Other descriptive statistics included population sample size,

and mean and median leadership efficacy scores within the sample. Tables provided a visual

showcase of differences in leadership experiences and counts by types of leadership experiences

(e.g., short-term, long-term, and leadership course experiences) to further demonstrate

differences between 2006, 2009, and 2012.

The next sections outlined specific data analysis strategy for each research question by

identifying variable type and level of measurement, and statistical test. Selection of each

statistical test was based on rationale outlined by Leech, Barrett, & Morgan (2014) and Field (2005). These authors provided step-by-step processes to determine the type of research question (e.g., difference or associational) and the number and levels of measurement by variable for each research question (e.g., nominal, scale, etc.), and then a selection of appropriate statistics.

Data Analysis Strategy R1

R1: Was there a difference in average leadership efficacy scores for undergraduates with leadership experiences and no leadership experiences at Colorado State University as measured by the Multi-Institutional Study of Leadership in 2006, 2009, and 2012?

Independent variable. The independent variable was labeled *ENV10* (undergraduate leadership experience of any kind), which measured dichotomous with response levels labeled either yes or no.

Dependent variable. The dependent variable – *leadership efficacy* – measured scale with four levels ranging from 1 - not at all confident, 2 - somewhat confident, 3 - confident, to 4 - very confident.

Statistical test. Statistical analysis explored the differences between groups using independent *t*-tests to compare means as recommend by Leech, Barrett, & Morgan (2014) and J. zumBrunnen (personal communication, 1/16/15).

To further explore the effects of leadership experience on leadership efficacy depending on the year the MSL survey was administered, factorial analysis (two-way ANOVA) was conducted using the General Linear Model Univariate program in IBM SPSS (Leech, Barrett, & Morgan, 2014).

Data Analysis Strategy for R2

R2: What were the effects of leadership experiences on leadership efficacy scores at Colorado State University as measured by the Multi-Institutional Study of Leadership in 2006, 2009, and 2012?

R2a: What were the effects of short-term leadership experiences on leadership efficacy?

R2b: What were the effects of long-term leadership experiences on leadership efficacy?

R2c: What were the effects of leadership courses on leadership efficacy?

Independent variable. The independent variables in this research question were identified as *leadership experiences* measured dichotomous across three categories – *short-term, long-term,* and *leadership course experiences*.

Dependent variable. The dependent variable was leadership efficacy was measured as an ordinal scale with four levels ranging from 1 - not at all confident, 2 - somewhat confident, 3 - confident, to 4 - very confident.

Statistical test. Guidelines to answer complex associational questions with directional hypothesis recommended inferential statistics including analysis of variance or regression analysis determined by the number and measurement of the independent variables (Field, 2005; Leech, Barrett, Morgan, 2014). One would assume with increased leadership experiences, then leadership efficacy scores would likely increase, so the potential linear relationship existed and supported comparison of groups provided data appeared normally distributed and all other assumptions were met. If violations of normality were violated, Spearman (RHO) would have been utilized (Leech, Barrett, & Morgan, 2014).

Assumptions for Data Analysis

      Several conditions must be met for data analysis (Leech, Barrett, Morgan, 2014). To check for errors and test assumptions of the data, common descriptive were requested from IBM SPSS version 22 and reported in the results chapter. Descriptive statistics for each variable included minimum and maximum ranges to ensure appropriate ranges per variable level. In addition, the following common assumptions were checked and reported in the results chapter.

      Variable types. All independent variables were identified as predictor variables; the independent variables of leadership experiences were measured quantitative or categorical as suggested by Fields (2005).

      Independence. To ensure the value of dependent variables existed separately tests for homogeneity of variance were conducted (Fields, 2005).

      Normality. Dependent variables were interval or scale level and checked for normal distribution through a test of kurtosis. Distribution for normality determined use of parametric or non-parametric statistical analysis (Leech, Barrett, Morgan, 2014).

      Multicollinearity. Multicollinearity might indicate high inter-correlation among predictor variables (Leech, Barrett, & Morgan, 2014). A perfect linear relationship or too high of a correlation must not exist (Fields, 2005). Tests for tolerance or VIF were reported to indicate conditions of multicollinearity.

      Linearity. Linearity assumed the relationship between the predicator variable and dependent variable was linear (Leech, Barrett, & Morgan, 2014); the outcome variable should predict along a straight line (Fields, 2005). Request through IBM SPSS 22 for correlation matrix tested for assumptions of linearity. Scatter plots provided checks for assumption that

relationships were linear and uncorrelated. Computing statistical mediation further indicated the linear relationships and effects of prediction (Leech, Barrett, Morgan, 2014).

Validity

In this study, factorial analysis was conducted to check the validity of the data as recommended by Creswell (2008), Field (2005), and Gliner, Morgan & Leech (2009). Attempts to achieve high internal and external study validity were also made throughout this study through the statistical techniques used to examine the data and presentation of the statistics. In addition, effect size was discussed in detail in the results section. Lastly, interpretation of data aimed to be appropriate and recognized the non-experimental nature of the original research design.

Reliability

In this study, reliability of the consistency of the results was checked using Cronbach's alpha (Creswell, 2008; Gliner, Morgan & Leech, 2009). In addition, consideration of the overall reliability of the instrument and measures were described above and addressed in the results.

<div align="center">Conclusion</div>

Because research in organizations has advanced day-to-day work by using careful application of research findings (Swanson & Holton, 2005), the research rationale in this chapter reflected a process of using data to shape a deeper understanding or knowledge about how individuals develop leadership capacity based on methods for quantitative inquiry presented by Creswell (2008). Additionally, by using appropriate methods, as suggested by Gliner, Morgan & Leech (2009), educational research can support the design of leadership development for college students, generate new ideas for curriculum, add to leadership development methods used in practice, and inform policy decisions related to resource allocation or staffing structures.

Specifically, this chapter suggested a research design and rationale to address the research problem within higher education to prepare students with effective leadership by conducting research linking leadership development with intended outcomes in an effort to better prepare college graduates to enter the workforce as urged by Goertzen (2009) and Higham, Freathy, & Wegerif (2010). This problem arose as a result of the leadership crisis (Bennis, 2007; Eich, 2008) and increased leadership development spending in organizations (O'Leonard & Krider, 2014) coupled with rising concerns and competing interests for programmatic funding on today's college campuses (Busteed, 2014).

As such, this chapter presented the methodology to address the research problem outlined by 1) the research questions, 2) population and sample, 3) instruments and measurement, 4) data collection, and 5) strategies for data analysis. Each component of the methodology contributed to the purpose of exploring relationships between leadership experiences on leadership efficacy to compare strengths of associations and differences among undergraduates at Colorado State University through a secondary analysis of data collected during the Multi-Institutional Study of Leadership in 2006, 2009, and 2012.

CHAPTER 4: RESULTS

"One's internal belief in the likelihood that they will be successful when engaging in leadership, is a key predictor of gains in leadership capacity as well as a factor in whether or not students actually enact leadership behaviors" (Dugan & Correia, 2014, p. 25). With rising costs for education and competing interests for programmatic funding (Busteed, 2014), leadership educators needed to make informed decisions (Snyder & Dillow, 2013) and demonstrate program predictability (Conger, 2013) in order for leadership training and education experiences to prepare students with capacity to lead in complex organizations. To address this problem in higher education, this research study explored the effects of leadership experiences on predicting leadership efficacy through a secondary analysis of data collected at Colorado State University during the Multi-Institutional Study of Leadership in 2006, 2009, and 2012.

This chapter reported results of the study including 1) preparation of data for analysis, 2) descriptive statistics and assumptions of data analysis, 3) reliability, 4) validity, and 5) results by research question.

Preparation of Data for Analysis

To accommodate changes in the MSL question formatting over the years and level responses between years of data collection, code books were reviewed with an aim of making corrections for accurate data interpretation. Variable names, labels, and response codes for each year were evaluated. Where possible, variables were merged and recoded with a corresponding new variable label with attention to maximize the information. For example, in 2009 and 2012, the MSL survey asked participants how often they engaged in various types of leadership experiences (e.g.: leadership conferences, retreats, courses, certificate programs, etc.) using a 4

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point range (1-never, 2-once, 3-sometimes, 4-often). In 2006, these experiences were asked as dichotomous responses – yes or no – as a follow-up to the range at which participants engaged in short-term, moderate-term, and long-term leadership experiences; additional sub-questions were nested into the 2006 survey.

Because not all questions were asked with a range response in 2006 as asked in 2009 and 2012, leadership experiences were factored as three independent variables to best address the research questions in this study. Leadership experiences were factored and labeled *short-term*, *long-term*, and *leadership course* experiences; each coded dichotomous with possible responses 1=yes or 2=no. The data from 2006, 2009, and 2012 was then merged into a single file for data analysis during this study.

Table 4.1 and 4.2 listed variable names, item description, response code and the transformed code used for analysis during this study.

Table 4.1

2009 & 2012 MSL Variable Name, Item Description, Response Code and Transformed Code

Variable	Item Description	Response Code	Transformed Code
ENV10	Since starting college, have participated in leadership training or education of any kind (ex: leadership conference, alternative break, course, club retreat)?	1=yes 2=no	ENV10 (no change)
ENV10a1	Leadership Conferences	1=never	ENV8A
ENV10a2	Leadership Retreat	2=once	1 recoded to 2=no;
ENV10a4	Leadership Lecture/Workshop Series	3=sometimes	2, 3, 4 recoded to
ENV10a5	Positional Leader Training (ex. Treasurer, Resident Assistant, Student Government)	4=often	1= yes
ENV10a7	Leadership Course	1=never 2=once 3=sometimes 4=often	ENVB1 1 recoded to 2=no; 2, 3, 4 recoded to 1= yes
ENV10a10	Short-Term Service Immersion		eliminated
ENV10a11	Emerging or New Leaders Program	1=never	ENV8C
ENV10a12	Living-Learning Leadership Program	2=once	1 recoded to 2=no;
ENV10a13	Peer Leadership Educator Team	3=sometimes 4=often	2, 3, 4 recoded to 1= yes
ENV10a14	Outdoor Leadership Program	1=never	eliminated
ENV10a15	Women's Leadership Program	2=once	
ENV10a16	Multicultural Leadership Program	3=sometimes 4=often	
ENV10a3	Leadership Certificate Program	1=yes	ENV8C
ENV10a6	Leadership Capstone Experience	2=no	
ENV10a8	Leadership Minor		
ENV10a9	Leadership Major		

Table 4.2

2006 MSL Variable Name, Item Description, Response Code and Transformed Code

Variable	Item Description	Response Code	Transformed Code
ENV8A	Since starting college, have you ever participated in short-term leadership experiences?	1=never 2=once 3=several times 4=many times	ENVA 1 recoded to 2=no; 2, 3, 4 recoded to 1= yes
ENV8B1	Did your experience involved leadership courses?	1=yes 2=no	ENVB1 1=yes; 2=no
ENV8C	Since starting college, have you ever participated in long-term leadership experiences?	1=never 2=once 3=several times 4=many times	ENVC 1 recoded to 2=no; 2, 3, 4 recoded to 1= yes
ENV8C1.1	Emerging or New Leaders Program	0=no	ENVC
ENV8C1.2	Peer Leadership Program	1=yes	1=yes; 0 recoded
ENV8C1.3	Leadership Certificate Program		to 2=no
ENV8C1.5	Senior Leadership Capstone		
ENV8C1.6	Living-Learning Leadership Program		
ENV8C1.7	Leadership Minor		
ENV8C1.8	Leadership Major		

Descriptive Statistics Assumptions for Analysis

The merged data from 2006, 2009, and 2012 resulted in 3,691 unique cases with n=1271 in 2006, n=1241 in 2009 and n=1179 in 2012. Descriptive statistics indicated 3,395 valid cases with a *leadership efficacy* score. The average *leadership efficacy* score was 3.19 with a standard deviation of 0.59 and median of 3.09. The *leadership efficacy scores* by year averaged 3.22 in 2006, 3.13 in 2009, and 3.24 in 2012, each reported at a 95% confidence interval.

A total of 1,558 students reported having participated in a leadership program or education experience of some kind since starting college. Frequency counts demonstrated a greater number of students reporting having participated in a leadership experience in 2006 than 2009 and 2012.

Table 4.3

Leadership Experiences by Year MSL Survey was Administered

	Count	
MSL Year	Yes	No
2006	806	372
2009	367	708
2012	426	630

More students reported having participated in *short-term, long-term,* and *leadership course* experiences as well in 2006. The following tables provided frequency counts by leadership experiences – *short-term, long-term, and leadership course* – during the year the MSL survey was administered.

Table 4.4

Short-Term Leadership Experiences by Year MSL Survey was Administered

	Count	
MSL Year	Yes	No
2006	735	443
2009	346	20
2012	384	42

Table 4.5

Long-Term Leadership Experiences by Year MSL Survey was Administered

	Count	
MSL Year	Yes	No
2006	284	894
2009	238	126
2012	278	147

Table 4.6

Leadership Course Experiences by Year MSL Survey was Administered

	Count	
MSL Year	Yes	No
2006	258	284
2009	246	120
2012	237	189

Several assumptions such as independence of observations, homogeneity of variances, normality, and linearity (Leech, Barrett, Morgan, 2014) required analysis before proceeding to the primary statistical tests aimed at answering the research questions. To check for errors and test assumptions of the data, exploratory data analysis was conducted through IBM SPSS version 22. Descriptive statistics, as well as specific tests for assumptions are reported, followed by the results of the primary data analysis methods.

Variables

The independent variable (leadership experiences) was measured as quantitative or categorical, each as predictor variables, as recommended by Fields (2005). Descriptive statistics confirmed appropriate minimum and maximum ranges for variables given the response code

levels (i.e., year surveyed ranged from 1 to 3, and all other independent variables ranged 1 to 2 given the dichotomous response of 1=yes, 2=no).

The dependent variables were measured as ordinal variables with four levels (1=not at all confident, 2=somewhat confident, 3=confident, and 4=very confident). Descriptive statistics showed a reasonable range of scores, variability, and central tendency ranging from 1 through 4.

Table 4.7 listed all variables in this study by name, label, value, and measurement level.

Table 4.7

Study Variables by Variable Name, Item Description, Response Value, and Measurement

Variable	Item Description	Response Value	Measurement
YEAR	Year survey was administered	1=2006 2=2009 3=2012	Nominal
ENV10	Since starting college, have you participated in leadership training or education?	1=yes 2=no	Nominal
ENV8A	Have you ever participated in a SHORT-TERM leadership experience?	1=yes 2=no	Nominal
ENV8B1	Has your leadership training or education experience included a leadership course?	1=yes 2=no	Nominal
ENV8C	Have you ever participated in a LONG-TERM leadership experience?	1=yes 2=no	Nominal
OUTEFF	Leadership Efficacy Scale	1=not at all confident 2=somewhat confident 3=confident 4=very confident	Scale

Independence of Observation

The assumption of independence of observations was supported with random sampling. This was also an effort to address the fact that the value of the dependent variable existed

separately (Fields, 2005). To further address independence of observations, the cases in this study merged were (random and comparative populations) from each year data was originally gathered to capture students with leadership experience in the random sampled population. Combining samples aimed to reduce likelihood of non-independence of observation that may have resulted with the purposeful sampling techniques used to gather data each year from the comparative samples (Leech, Barrett, & Morgan, 2014).

Homogeneity of Variances

Box-and-Whiskers plots were requested through IBM SPSS 22 to test for assumptions of homogeneity of variance and to assess distribution of scores between participants who answered *yes* and *no* in response to having ever participated in a leadership training or leadership education experience since starting college.

Graph 1 depicts the Boxplot for participation in leadership training or education experience of any kind in relationship to leadership efficacy.

ENV10: Since starting college, have you ever participated in a leadership training or leadership education experience of any kind (ex: leadership conference, alternative spring break, leadership course, club president's retreat)?
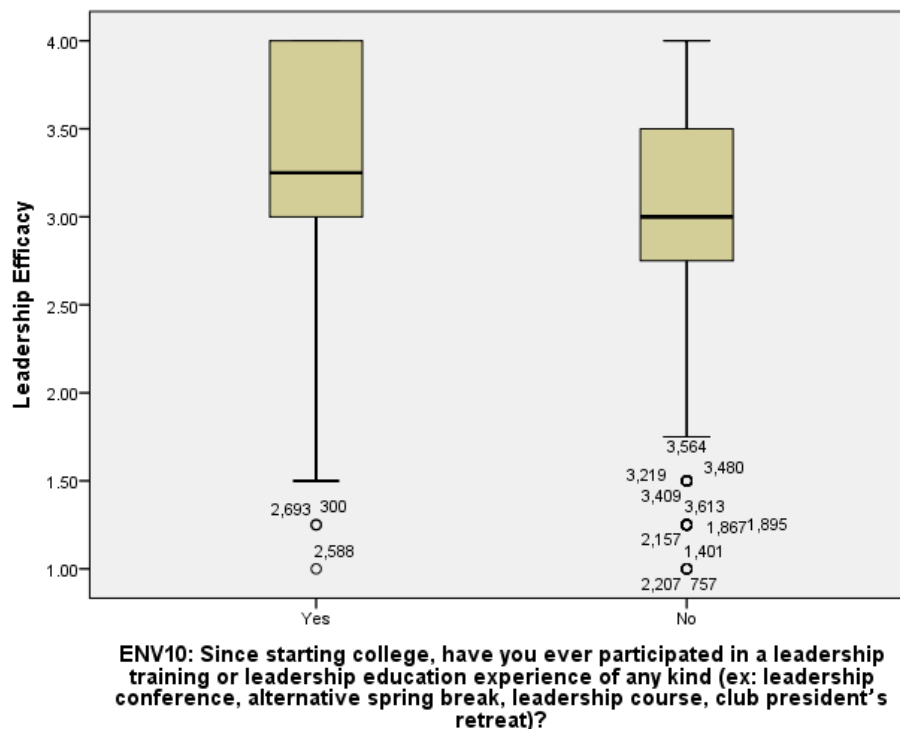
Exploratory descriptive analysis showed 1,558 valid cases with a *leadership efficacy*

score from participants who answered *yes* and 1,671 valid cases with a *leadership efficacy* score

from participants who answered *no.* The average *leadership efficacy* score for response *yes* was

3.34 and the average *leadership efficacy* score for response *no* was 3.07, each reported at a 95%

confidence interval. Skewness values were less than one with a *yes* response reported at -0.49

and *no* response reported at -0.33. The plot provided some indication of homogeneity of

variance with higher *leadership efficacy* means of *yes* respondents reported, but substantial

overlap of the full distribution of scores limited inference of actual difference.

Normality

The dependent variables, which measured scale, were checked for normal distribution

through a test of kurtosis to support use of parametric inferential statistical analysis (Leech,

Barrett, Morgan, 2014). Specifically, normality was tested with check for skewness using the

standard guideline of less than plus or minus one (< +/- 1.0). *Leadership efficacy,* labeled

OUTEFF, was approximately normally distributed with a statistic reported at -0.42 through IBM

SPSS version 22. The data appeared approximately normally distributed within each individual

year of data collection as well. Skewness values also reported each year within plus or minus

one (2006 reported at -0.41; 2009 reported at -0.35; and 2012 reported at -0.56).

Linearity

Linearity assumes the relationship between the predictor variable and dependent variable

as linear (Leech, Barrett, & Morgan, 2014) or that the outcome variable can be predicted along a

straight line (Fields, 2005). A mixed-matrix scatterplot in IBM SPSS 22 was used to examine

the assumption of linearity with predictor variables *short-term, long-term,* and *leadership course*

and dependent variable *leadership efficacy*. The scatter plots depicted some clustering along two distinctive plots given the dichotomous predictor variable.

Graph 2 depicted the Scatterplot for *leadership experiences* on *leadership efficacy*.
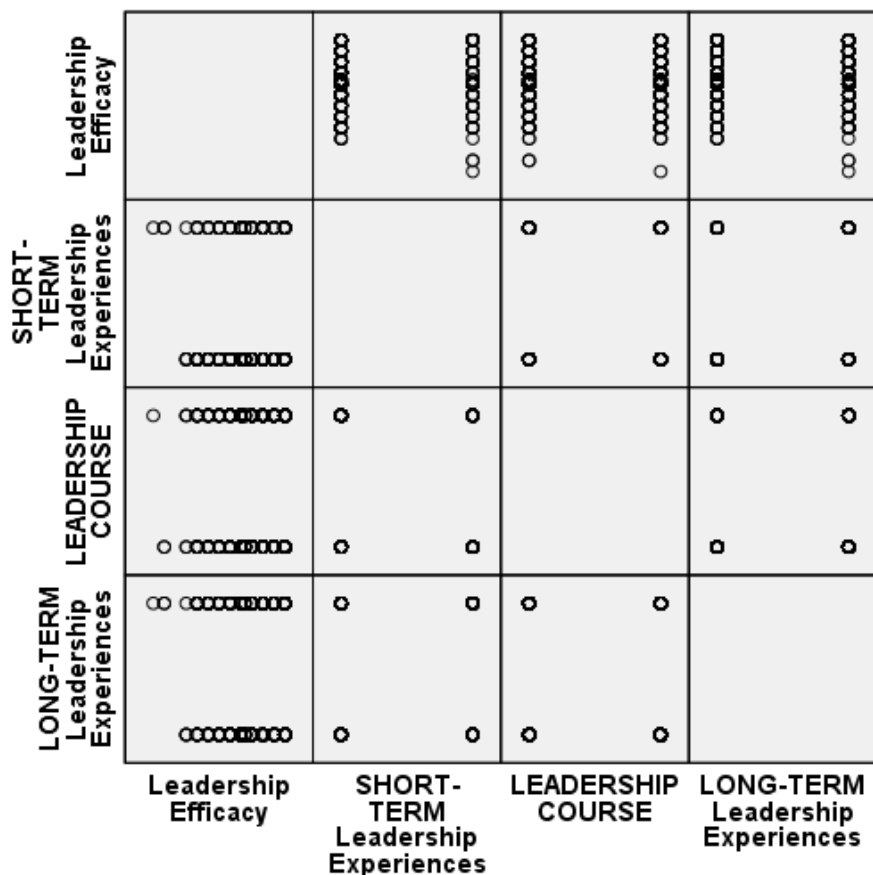
Reliability

"Reliability refers to the degree to which an indicator is a consistent measuring device" (Sweet & Grace-Martin, 2008, p.9). The original authors of the MSL created a scale for *leadership efficacy* using four items that assessed a student's confidence in their own ability to enact selected leadership behaviors (Dugan & Komives, 2007).

During each year the survey was administered, participants were asked to rank their confidence in their ability on four items: 1) lead others, 2) organize group tasks to accomplish a

goal, 3) take initiative to improve something, and 4) work with a team on group projects. Each question allowed a response with four levels that ranged from 1-not at all confident, 2-somewhat confident, 3-confident, to 4-very confident.

Given the importance of testing the reliability of data prior to conducting inferential statistics (Leech, Barrett, & Morgan, 2014), the four items that created *leadership efficacy* were checked for internal consistency reliability using Cronbach's coefficient alpha. Utilizing the range greater than 0.70 and less than 0.90, the alpha reported at 0.88 indicated the data for *leadership efficacy* showed high reliability of scores for this study.

Validity

As reported in the 2012 MSL Executive Summary, evidence for measurement validity was established in pilot studies and in 2006. Psychometrics and design considerations were addressed through content validity of measures established in the SRLS creation; criterion-related validity was examined to demonstrate both appropriate and consistent relationships between outcome variables and theoretical measures (Tyree, 1998). Construct validity was examined in pilot studies and iterations since 2006 (MSL, 2014). Although data comes from students self-reporting, numerous research studies conducted show accuracy of self-reported data (Turrentine, 2001 in MSL Full Report Findings, 2012).

Furthermore, to attain high internal and external research validity, this study implored attempts to interpret data appropriately and adhere to the original research design as non-experimental. Additionally, this report described each statistical technique used to examine data including tests for assumptions and effect size.

Principal component factor analysis was conducted to assess construct validity of the data used to create the MSL *leadership efficacy* scale as recommended by Leech, Barrett, & Morgan

(2014). Assumptions of independent sampling were met. Assumptions of normality, linear relationships, and correlated variable were met. The determinant was larger than 0 (0.12). The Kaiser-Meyer-Olkin (KMO) indicated adequate items were predicted by each factor (0.82). The Bartlett test indicated statistical significance with a value reported less than 0.05. The correlation matrix showed each of the four items related to the other three variables (0.53 to 0.76). Only one component had an initial Eigenvalue more than 1.0. The component explained 72.97% of the total variance. Table 4.8 display items and loadings. Only one component was extracted so the solution was not rotated. Results suggest each measure forms one coherent component.

Table 4.8

Factor Loadings from Principal Component Factor Analysis (n=3395)

Item	Loading	Communality
OUT2A: Leading Others	.88	.77
OUT2B: Organizing groups	.90	.81
OUT 2C: Taking Initiative	.87	.75
OUT2D: Working in team	.77	.59
Eigenvalues	2.92	
% of variance	72.97	

Results for Research Question 1

R1: Was there a difference in average leadership efficacy scores for undergraduates with leadership experiences and no leadership experiences at Colorado State University as measured by the Multi-Institutional Study of Leadership in 2006, 2009, and 2012?

The single-factor or independent variable was labeled *ENV10* (undergraduate leadership experience of any kind), which measured dichotomous with response levels labeled either yes or

no. *Leadership efficacy* measured scale with four levels – 1-not at all confident, 2-somewhat confident, 3-confident, 4-very confident.

To investigate differences between groups of students reporting *yes* to having participated in a leadership training or experience of any kind since starting college and those reporting *no*, an independent samples *t*-test was conducted to compare the means for *leadership efficacy* as recommend by Leech, Barrett, & Morgan (2014). The average *leadership efficacy* score for individuals reporting *yes* was 3.34 and 3.01 for students reporting *no*. Results of the *t*-test indicated a statistically significant difference in *leadership efficacy* with an average difference of 0.27 greater leadership efficacy score in students reporting *yes* than those reporting *no* ($t = 12.97$; $df = 32$; $p <.001$). The Levene's Test for equality of variances was not statistically significant at 0.98, so equal variances were assumed.

Because the independent variable measures dichotomous, *d* Family value was calculated to estimate effect of the significance by dividing the average difference by the pooled standard deviation. With an average difference of 0.27 and pooled standard deviation of 1.18, the effect size was estimated as small with $d = 0.23$.

A factorial analysis (two-way ANOVA) was conducted using the General Linear Model Univariate program in IBM SPSS. This statistic further explored the effects of leadership experience on leadership efficacy depending on the year the MSL survey was administered. The independent variable or fixed factors used for analysis were *leadership experience* and the *survey year*. The dependent variable was *leadership efficacy.* A plot of the estimated marginal means of *leadership efficacy* by *survey year* with separate lines for *leadership experience* was requested.

In 2006, 2009, and 2012, there were 1,558 participants who responded *yes* to having participated in a leadership training or education experience of any kind. Table 4.9 represents

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the counts, means and standard deviation of leadership efficacy for leadership experience and the year the MSL was surveyed.

Table 4.9

Counts, Means, and Standard Deviation for Leadership Efficacy as a Function of Leadership Efficacy and MSL Survey Year.

	Yes Leadership Experience			No Leadership Experience			Total		
MSL Year	n	M	SD	n	M	SD	n	M	SD
2006	776	3.29	0.57	347	3.05	0.63	1123	3.22	0.60
2009	367	3.34	0.54	708	3.04	0.61	1075	3.14	0.61
2012	415	3.43	0.53	616	3.12	0.64	1031	3.24	0.61
Total	1558	3.34	0.56	1671	3.07	0.62	3229	3.20	0.61

The Levene's Test of Equality of error of Variances was not significant ($p = 0.14$) so the assumption for homogeneity of variances were met. Table 4.10 shows there was not a reported statistically significant interaction between leadership experience and the MSL survey year on leadership efficacy, $F(2,3223) = 1.09$, $p = 0.34$, partial $eta^2 = 0.001$.

Table 4.10

Two-way Analysis of Variance of Leadership Efficacy as a Function of Leadership Experience and MSL Survey Year

Variable and Source	df	MS	F	p	partial η^2
MSL Survey Year	2	2.82	8.06	<.001	0.01
ENV10: Leadership Experience	1	59.87	170.84	<.001	0.05
Year*ENV10	2	0.38	1.09	0.34	0.00
Error	3223	0.35			

Results for Research Question 2

R2: What were the effects of leadership experiences on leadership efficacy scores at Colorado State University as measured by the Multi-Institutional Study of Leadership in 2006, 2009, and 2012?

R2a: What were the effects of short-term leadership experiences on leadership efficacy?

R2b: What were the effects of long-term leadership experiences on leadership efficacy?

R2c: What were the effects of leadership courses on leadership efficacy?

Multiple regression analysis was conducted to determine best linear combination of *short-term, long-term,* and *leadership education* experiences for predicting *leadership efficacy.* The mean for *leadership efficacy* was 3.37 with a standard deviation of .56 (n=1304). Assumptions of linearity, normality, and correlations were check and met. None of the relationships among the predictors was greater than .17. Checks for multicollinearity reported Tolerance and VIF values all close to 1.

Short-term and *long-term* leadership experiences were statistically significant as predictors of higher average *leadership efficacy* scores at $p \leq .01$. *Leadership course* as a predictor was statistical significant at $p \leq .05$. The combination of *short-term, long-term,* and *leadership course* experiences significantly predicated *leadership efficacy*, $F(3,1300) = 9.46$, $p<.001$, and the null hypothesis was rejected. The adjusted R squared value, at .02, indicated a small or smaller than typical effect size (Cohen, 2013).

Conclusion

With rising costs for education and competing interests for programmatic funding (Busteed, 2014), leadership educators needed to make informed decisions (Snyder & Dillow, 2013) and demonstrate program predictability (Conger, 2013) in order for leadership training and

education experiences to prepare students with capacity to lead in complex organizations. To address this problem in higher education, this research study explored the effects of leadership experiences on leadership efficacy through a secondary analysis of data collected at Colorado State University during the Multi-Institutional Study of Leadership in 2006, 2009, and 2012.

This chapter reported the results of this study including 1) preparation of data for analysis, 2) descriptive statistics and assumptions of data analysis, 3) reliability, 4) validity, and 5) results by research question. The next chapter concludes this study with the interpretation of these results. The chapter includes a discussion, limitations, and implications for theory, research, and practice.

CHAPTER 5: INTERPRETATION OF THE RESULTS

With rising costs for education and competing interests for programmatic funding (Busteed, 2014), leadership educators needed to make informed decisions (Snyder & Dillow, 2013). Furthermore, leadership education must demonstrate program predictability (Conger, 2013) in order to prepare students with capacity to lead in complex organizations. Because research in organizations has advanced day-to-day work by using careful application of research findings (Swanson & Holton, 2005), this study used research to address a problem in higher education deepening understanding and application for leadership education.

This non-experimental research study explored the effects of leadership experiences on leadership efficacy through a secondary analysis of data collected at Colorado State University during the Multi-Institutional Study of Leadership in 2006, 2009, and 2012. This final chapter concluded the study by presenting 1) discussion, 2) limitations, and 3) implications for theory, research, and practice.

Discussion

During this study, two primary research questions were explored. The first question aimed to examine differences between groups of undergraduate students in average leadership efficacy scores. The groups were undergraduate students who reported they had participated in leadership training or leadership education experience of any kind (e.g.: leadership conference, alternative spring break, leadership course, club president's retreat) and those reporting they had not. The second research question examined the effects of three types of leadership experiences (e.g.: short-term, long-term, and leadership course experiences) as a predictor of leadership

efficacy scores. Prior to reporting on these research questions, validity of the data and reliability of the results was tested.

A principal component factor analysis supported high data validity, meaning that the instrument measured what it claimed to measure in this case. Statistical analysis reported 73% of the total variance was explained by only one component within the leadership efficacy scale. Statistical analysis also indicated high internal consistency reliability for leadership efficacy. Cronbach's coefficient alpha was reported at 0.88, which further supported that the MSL survey was a consistent measurement device (Sweet & Grace-Martin, 2008). These statistical tests also indicated the samples from the 2006, 2009, and 2012 MSL instrument provided valid and reliable data to examine the research questions in this study.

Results of independent t-tests used to address the first research question indicated higher average leadership efficacy scores for students reporting *yes* to having some leadership training or leadership education experience while in college ($M_{difference} = 0.27, p<.001$). The effect of the significance was small ($d = 0.23$). There was no statistical significance reported by the factorial analysis for the interaction between leadership experiences and the year the MSL survey was administered on predicting leadership efficacy, $F(2,3223) = 1.09$, $p = 0.34$, partial eta$^2 = 0.001$.

Because the statistical effect was estimated as small, minimal conclusions can be drawn as to the differences or effects of leadership experiences on leadership efficacy for this population sampled. This is not to say that undergraduate leadership opportunities on college campuses should not be supported, however, in these particular instances strong, definitive conclusions could not be drawn about differences or effects of leadership experiences of undergraduates in 2006, 2009, and 2012 as asked by the research questions in this study or for this population.

To address the second research question, a regression analysis was conducted to examine which types of leadership training or leadership education experiences had an effect on predicting leadership efficacy scores. Results indicated that *short-term* and *long-term* leadership experiences had a statistically significant effect on predicting higher average scores for *leadership efficacy* at a 99% confidence interval. *Leadership courses* had a positive effect also on predicting higher average *leadership efficacy* scores at a 95% confidence interval. The combination of experiences was also statistically significant ($p < .001$) at predicting higher average scores. The effect was small with an adjust R squared value of .02. Because of the small effect size, again minimal conclusion was drawn as to the practical effect leadership experiences have on predicting higher average leadership efficacy scores.

The results of this study were also not surprising because data analysis was unable to estimate the strengths of association based on attributes such as type or intensity of a leadership experiences. During data analysis it was discovered that the MSL question formatting varied over the years and not reported in the same way during all three years of data collection. For example, in the 2012 and 2009 versions of the MSL survey categorized 12 types of *co-curricular leadership experiences* with four levels of response options. The response codes measured ordinal from 1 – never, 2 – once, 3 – sometimes, and 4 – often. Four additional types of leadership experiences categorized as *curricular* with a dichotomous response code – yes or no – were included.

In 2006, the instrument first asked respondents three questions about their participation in a leadership training or leadership experience with conditional response options that generated sets of sub-questions. For example, to what extent (i.e., never, once, sometimes, or often) have you participated in short-term leadership experiences? The question was repeated with

moderate-term and long-term leadership experience. If a respondent replied some level of participation, then additional questions were included about type of experience (e.g.: was this a peer leadership program, multi-semester, a leadership course, etc.?) with a yes or no response option.

Conditional questions distinguishing the types of leadership experiences were fewer in 2006 than in 2009 and 2012. These subtle nuances in question formatting changed the manner in which type (i.e., leadership training or leadership education experiences as curricular and co-curricular or leadership) and intensity (i.e., undergraduate participation once as compared to often). To the benefit of future studies, the MSL instrument has since asked questions in the format that now captures this more robust data about student participation in leadership experiences during college that can be better explored in future studies.

Because not all questions were asked with a range response in 2006 as asked in 2009 and 2012, leadership experiences were factored as three independent variables to best address the research questions in this study. Leadership experiences were factored and labeled *short-term*, *long-term*, and *leadership course* experiences; each coded dichotomous with possible responses 1=yes or 2=no. This change in response coding caused limitations to this study.

Limitations

This study was bound by four key limitations. The limitations were namely 1) depth of leadership experiences, 2) the use of self-report data, 3) participant perceptions and beliefs about leadership, and 4) institutional context. Each described in further detail.

This study was limited in the depth of which leadership experiences could be analyzed for differences and effects because of the levels and types of responses coded during data transformation. To accommodate changes in the MSL survey between years of data collection,

variables were transformed. However, because this study aimed to examine the research data

since the MSL started in 2006, data transforming was necessary causing the limitation. Attempts

to control for this limitation were made through analysis of variance and recognized when

interpreting the result.

This study was limited by the use of student self-reported data. Although mixed support

related to this limitation can be found in the literature, numerous research studies have been

conducted to show accuracy of self-reported data (Turrentine, 2001 in MSL Full Report

Findings, 2012). This study aimed to control for this limit with tests of validity and reliability.

This study also recognized the extent to which interpretation of the results indicate *leadership*

efficacy as self-perception as compared to measured leadership capacity.

The scope of this study was limited by nature of the inquiry which allowed participants to

form their own opinions, rationale, and beliefs about leadership. For example, college students'

understanding of leadership varies across demographic identifiers and lived experiences (Haber,

2012). Furthermore, as demonstrated in the literature review of this study, there have been an

abundance of types and styles of leadership defined over the years. Although this study set

parameters using contemporary and post-modern definition of leadership, such parameters could

not be tested for how students defined as leadership.

The study was limited to the institutional context through examination of a population at

one research I university located in the western United States. Because undergradute leadership

programs were reported to have a direct influence on leadership outcomes (Cress, Astin,

Zimmerman-Oster, & Burkhardt, 2001), this research only drew conclusions only about the

target and sampled populations to control for this limitation.

Implications

Leadership efficacy was defined as one's internal belief in their ability to perform leadership-related tasks and the scale was designed using Bandura's efficacy measures (Dugan, Fath, Howes, Lavelle, & Polanin, 2013). Bandura (1993) demonstrated that perceived self-efficacy encompassed four processes – cognitive, motivational, affective, and selection – each of which markedly contained further subsets of attitudes and behaviors that supported the process. For example, self-efficacy of cognitive processes might include thought patterns that influence one's behavior reinforced by acting out those behaviors. Therefore, someone with a higher sense of self-efficacy might think through ways to accomplish goals then set goals, and then act on ways to achieve those goals (Bandura, 1993).

The leadership efficacy scale was based on four items. The items asked participants to report how confident they were that they can be successful at 1) leading others, 2) organizing a group's tasks to accomplish a goal, 3) taking initiative to improve something, and 4) working with a team on a group project. The scale response for the four items ranged from 1) not at all confident, 2) somewhat confident, 3) confident, to 4) very confident. Given the definition of leadership efficacy and magnitude of leadership-related tasks, does the leadership efficacy scale represent the extent to which undergraduates could build leadership efficacy? Does the scale for leadership efficacy recognize the vast amount and types of leadership experiences offered on college campuses?

Implications for Theory

Kodama & Dugan (2013) distinguished the important difference between efficacy and skill. Furthermore, evidence has supported that leadership education contributed to leadership efficacy, but greater depth of analysis was needed to distinguish between leadership skills and

leadership efficacy. The scale represents both one's belief and one's skills in application. Are four items sufficient for the scale or could a more robust scale support greater understanding of leadership efficacy?

College students' understanding of leadership and leadership definitions various across race, gender, and age (Haber, 2012). Research that examined the effects of leadership experiences on leadership efficacy among varying populations and demographics has been conducted (e.g., Dugan, et al., 2013; Dugan, Garland, Jacoby, & Gasiorski, 2008; Dugan & Yurman, 2011; Shalka & Jones, 2010). However, leadership characteristics vary across behaviors and themes such as leader-follower relationships, characteristics and behaviors, or leadership outcomes as found through themes in college students' definitions of leadership (Haber, 2012). Future research studies need to test theory of self-efficacy to create a more robust leadership efficacy scale that accounts for differences among populations and varying ways in which students internally see their leadership abilities.

Implications for Research

This study demonstrated an opportunity for future research when considering the scale itself and the nature of what's was being measured. For example, does a student who entered college with a high sense of leadership efficacy differ with campus leadership experiences as compared to a student who entered college with a high leadership efficacy, but had no campus leadership experiences? The MSL measured for and provided a pre-collegiate leadership efficacy scale by asking students to consider their sense of leadership efficacy prior to college as compared to where they are now. So this question could be explored in future studies.

The current study sets up a template for future studies. This study stands as an example of how data collected through the Multi-Institutional Study of Leadership could be used in future

research to improve leadership programs at the institution where this study was conducted. For example, the data has not been rigorously used in the past to explore the differences between leadership type and intensity as an effect on leadership efficacy. Nor has exploration of the data beyond descriptive analysis been considered at this institution.

Furthermore to what extent can a change in leadership efficacy be measured given the closed-range scale with a maximum score of 4.0 that does not allow for any participant to infinitely reach leadership efficacy? Changes in participants with a higher sense of leadership efficacy prior to college have less ability to change or a smaller gap before reaching maximum leadership efficacy as measured by this scale. For example participants who measured at 2.0 or 3.0 prior to college would seemingly have a smaller change in leadership efficacy than those who might measure at 1.0 prior to college. Again, this created an opportunity to consider ways in which to look at differences between pre-collegiate leadership efficacy and leadership efficacy scores of students when in college to consider changes or effects of leadership experiences.

Implications for Practice

This study was conducted because the research on the effects of leadership education on leadership efficacy was significantly lacking, which limited the ability to draw strong conclusions (Haber & Komives, 2009). Some research supported outcomes as a result of a direct program participation, but limited generalizability to broad context of college populations. In addition, the lack of research across multiple environmental variables limited the conclusions and implications of the effects of varying leadership experiences such as co-curricular experiences, holding a leadership positon, or taking leadership classes (Haber & Komives, 2009).

Research supported the idea that participation in leadership education and training programs contributed to development of the personal aspects of leadership (Haber & Komives,

2009). However, with so many varying leadership education and training programs on college campuses (Cress, et al., 2001; Komives, et al. 2011), was what's being measured, reflective of what's being taught? This further supports the continued call to educators to conduct research on student leadership development and models used in practice (Dugan, 2006a) and the strongly emphasized need for assessment of programs to ensure participants reach intended learning outcomes (Goertzen, 2009). Continued refinement of the survey and examination of the data will allow future researchers to more specifically examine leadership experiences for continuous improvement and management of leadership programs at the host institution.

For example, the MSL instrument now asked questions in a format that captured greater depth about student participation in leadership experiences during college. Therefore, future research studies can better examine if the number of leadership experiences or type of leadership experiences was predictive of leadership efficacy. Additionally, continued educational research can support leadership development design, support changes to curriculum, and better link program outcomes used in practice. With stronger support with theory and research, then educators can continue to make informed policy decisions related to resource allocation or staffing structures.

Conclusion

This dissertation addressed the research problem burdening higher education to better prepare students with leadership they can effectively apply in complex organizational environments during a time of rising costs for education and competing interests for programmatic funding. This context coupled with high costs for corporate training to generate performance improvements and increased spending on leadership development during a

recognized crisis in organizational leadership in the U.S. increased pressure on employers to hire college graduates who can enter the workforce with demonstrated leadership capacity.

To address the research problem, the purpose of this non-experimental research study explored the relationships between leadership experiences on leadership efficacy by comparing strength of associations and differences in undergraduate students at Colorado State University through a secondary analysis of data collected during the Multi-Institutional Study of Leadership in 2006, 2009, and 2012. The research design and rationale included between-groups mixed factorial design using independent samples *t*-tests, factorial analysis, and regression analysis as inferential statistics to explore differences in average *leadership efficacy* scores and effect of *leadership experiences* in predicting *leadership efficacy.*

Target population for this study was undergraduate students enrolled at Colorado State University's main campus. As part of the Multi-Institutional Study of Leadership in 2006, 2009, and 2012, sampled populations were drawn from the undergraduate population each year.

Results indicated high internal consistency reliability for leadership efficacy data with a 0.88 Cronbach's coefficient alpha. Assumptions of independence, normality, and linearity were met. Principal component factor analysis supported construct validity of the data used to create the MSL leadership efficacy scales with 73% of the total variance explained by only one component.

Results indicated higher average leadership efficacy scores for students with leadership experiences in college ($M_{difference} = 0.27$, p<.001). Results also indicated leadership experiences have a positive effect on predicting higher average leadership efficacy, but the effect of both was small. Because the statistical effects were small, no practical implications were made as to the differences and effects of leadership experiences on leadership efficacy. It was not concluded

that leadership opportunities on college campuses should not be supported, but that opportunity existed for further research and was needed.

Given the definition of leadership efficacy and magnitude of leadership-related tasks, future research studies need to test theory of self-efficacy to create a more robust leadership efficacy scale that accounts for differences among populations and varying ways in which students internally see their leadership capabilities. This study further supported the continued call to educators to conduct research on student leadership development and models used in practice (Dugan, 2006a; Goertzen, 2009). Furthermore, this study strongly emphasized need for continued assessment of programs to ensure participants reach intended outcomes.

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Appendix I

Constructs of the Social Change Model of Leadership Development

Construct (Value)	Definition (HERI, 1996; Tyree, 1998)
Consciousness of self	Awareness of the beliefs, values, attitudes, and emotions that motivate one to take action.
Congruence	Thinking, feeling, and behaving with consistency, genuineness, authenticity, and honesty towards others; actions are consistent with most deeply-held beliefs and convictions.
Commitment	The psychic energy that motivates individual to serve and drives collective effort; implies passion, intensity, and duration; directed toward group activity as well as its intended outcomes.
Collaboration	To work with others in a common effort; cornerstone value of group leadership effort; empowers self and others through trust.
Common purpose	To work with shared aims and values; facilitates group's ability to engage in collective analysis of issues and tasks undertaken.
Controversy with civility	Recognizes two fundamental realities of any creative group effort: differences in viewpoint are inevitable and differences must be aired openly, but with civility. Civility implies respect and willingness to hear other's views; restraint in criticizing views and actions of others.
Citizenship	The process whereby an individual and collaborative group become responsibly connected to community and society through a leadership development activity; work for positive change on behalf of others.
Change	Adapting to evolving environments/situations; maintain group function.

Group Values

Collaboration
Common Purpose
Controversy with Civility

Change

Consciousness of Self
Congruence
Commitment

Citizenship

Individual
Values

Society / Community
Values
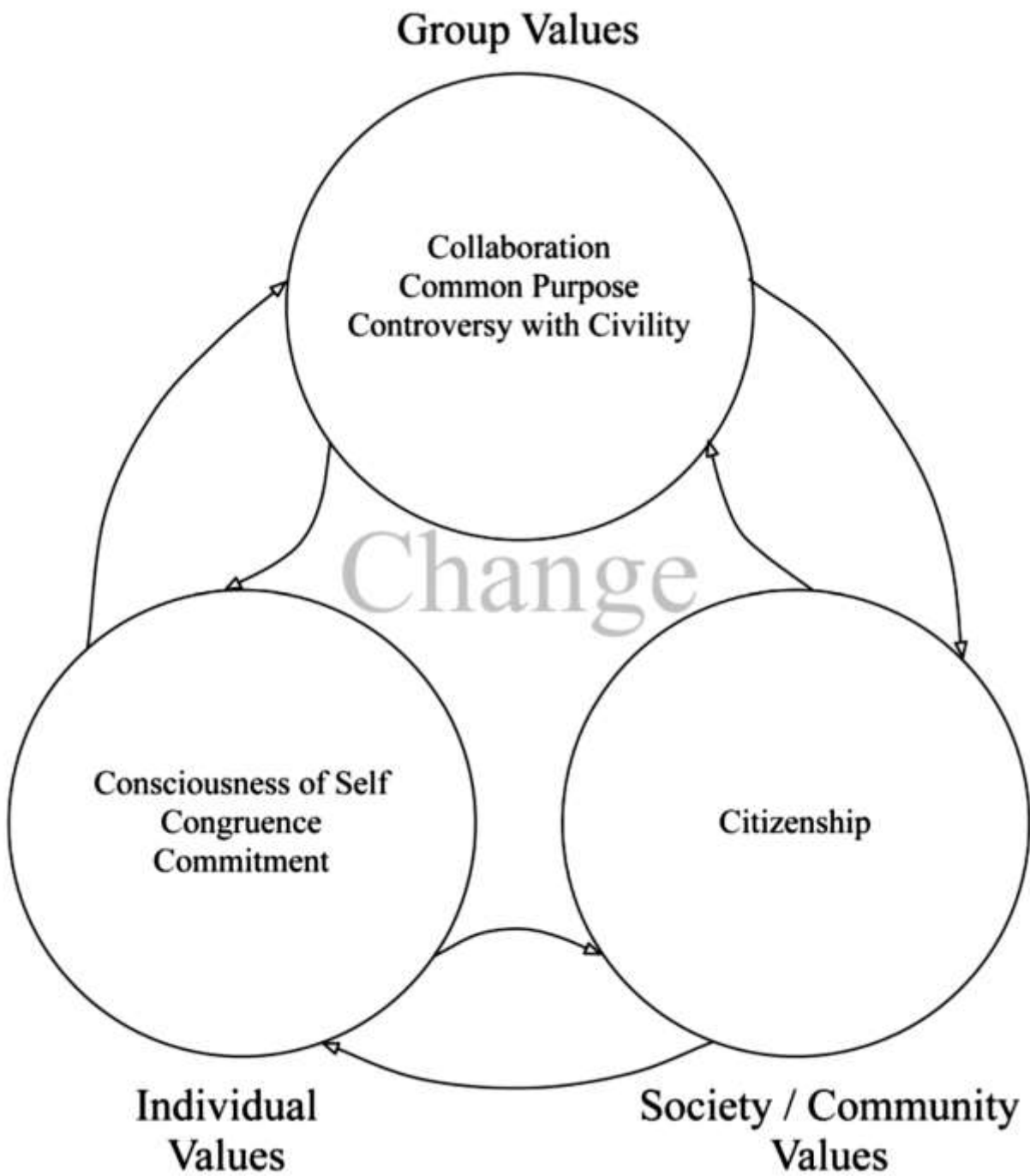
Figure 1: Social Change Model of Leadership Development (HERI, 1996; Tyree, 1998)

Appendix II

Leadership Experiences at Colorado State University

The Multi-Institutional Study of Leadership coded 12 leadership experiences divided into two categories – curricular and co-curricular. Paralleled to the variable labels coded by the MSL, Colorado State University offered a variety of curricular and co-curricular leadership experiences to undergraduate students during 2006, 2009, and 2012 when data was collected for this study. While not exhaustive of all leadership development opportunities offered at Colorado State University during that time, the following list was intended to represent the types of leadership experiences measured by the MSL at the time of data collection. For leadership experiences that have evolved, the most current program description was listed below.

Curricular Leadership Experiences

Curricular leadership experiences were defined as an experience where a student earned academic credit for participation in a classroom experience or educational programs with leadership development as a primary objective or outcome of the course content.

Key Communities. Key Communities were designed as living and learning communities to assist students' transition during the first and second year in college. The experience included active and experiential learning, service learning, and career exploration. The program aimed to retain students and increase academic performance while supporting underrepresented populations and promoting diversity (Key, 2015).

President's Leadership Program. President's Leadership Program offered a series of six courses totaling fourteen credits for participating students to expand knowledge about themselves, diversity issues, values and ethics in the greater context of leadership development.

The curriculum reflected a modern interpretation of leadership as a process of people working together to effect positive change (PLP, 2015).

Interdisciplinary Minor in Leadership Studies. Interdisciplinary Minor in Leadership Studies prepared students to serve effectively in formal and informal leadership roles and provided a structure for students to create their own understandings and practice of leadership grounded in their disciplinary training. The minor included six intra-University courses, one capstone experience in the student's major, and an independent study, research based, or applied practicum mentored by a sponsoring faculty and/or the minor advisor (Minor, 2015).

Co-Curricular Leadership Experiences

Co-curricular leadership experiences were defined as conferences, retreats, trainings, service or emergence programs, peer education, gendered or multicultural programs, and/or positional or employment experience that did not result in academic credit. For the purpose of data analysis, co-curricular leadership experiences were then also divided into short-term (less than 30 days), long-term (30 days to one academic year), and employment opportunities (paid positions) to allocate a level of intensity to the experience.

Short-term. Short-term co-curricular leadership experiences included conferences, retreats, lecture/workshop series, and volunteer or services immersions experiences that required a 30 day or less commitment.

30 Day Challenge. 30 Day Challenge was a way for students to identify a lifestyle change that they would like to make for 30 days and then receive support and resources to reflect on the experiences (30 Days, 2015).

Alternative Breaks. Alternative Breaks were service immersion experiences into different cultural, environmental and socioeconomic communities across the nation. Students provided

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service in exchange for education about current social and cultural issues facing the host communities (AltBreaks, 2015).

   Campus StepUp. Campus StepUp was a three day social justice training retreat that encouraged students to become more aware of diversity and cross-cultural communication in a safe environment that focused on self-reflection, education, and personal growth (StepUp, 2015).

   Cans Around the Oval. Cans Around the Oval was a 30 day canned food and donation drive to support the food back of Larimer while raising awareness about hunger (Cans, 2015).

   CSUnity. CSUnity was a one day service plunge for students planted trees, painted houses, visited with senior citizens, and other neighborhood projects (CSUnity, 2015).

   L.E.A.D. Sophomore Conferences. L.E.A.D – Leading, Empowering, Advancing, Determined – focused on leadership development for second year Black/African American and Latino students through facilitated workshops on a variety of topic. (BAACC, 2015)

   LeaderShape. LeaderShape was a week-long retreat that involved living in a state of possibility, making a commitment to a vision, developing relationships to move the vision into action, and sustaining a high level of integrity (LeaderShape, 2015).

   Project Homeless Connect. Project Homeless Connect was a one day event that provided individuals and families experiencing homelessness with access to vital services such as: rapid re-housing, basic medical exams, or legal advice (PHC, 2015).

   REAL Experience. Rams Engaging in Active Leadership, *the REAL Experience,* was a lecture/workshop series for participants to discuss leadership topics. Students could attend one or more workshops of interest to earn certificates of completion (REAL, 2015).

Women's Conference. The Women's conference was a one day conferences that included keynote speakers, performances, and breakout sessions designed to engage conversation around gender and other social justice topic in both education and entertainment (WGAC, 2015)

Long-term leadership experiences. Long-term leadership experiences included trainings, involvement, mentoring, or living-learning communities lasting longer than 30 days, most often one full semester or the entire academic year, and did not incorporate University employment.

AmeriCorps. Hosted by Campus Compact of the Mountain West, AmeriCorps was a regional effort to engage students with local nonprofit and government agencies by serving high need, community priority areas through meaningful service over a year (AmeriCorps, 2015).

Associated Students of Colorado State University. Associated Students of Colorado State University (ASCSU) provided a student government each academic year functioning as a liaison between University administration, the city of Fort Collins, and the State of Colorado advocating for student needs (ASCSU, 2015).

CSU/UADY Leadership Exchange. CSU/UADY Leadership Exchange brought together students from Colorado State University and the Universidad Autonoma de Yucatan (UADY) for leadership, service and language exchange. The program lasted an academic year, which included CSU student traveling to Merida, Mexico in the Yucatan and a UADY students traveling to Colorado (CSU/UADY, 2015).

First Year Peer Mentors. The First Year Mentoring Program offered groups of one upper-class peer mentor, a faculty/staff mentor and approximately 5-30 first year students to assist them in the transition to college. Groups met weekly for the first 12 weeks of the semester and were based on an interest, passion or identity of the mentors (OTP, 2015).

Fraternity & Sorority Life. Fraternity & Sorority Life provided leadership opportunities through student empowerment and involvement of members in service to both CSU and the community in collaboration with other University resources, national offices and associations, and alumni(ae), the Fraternity & Sorority Life Office (Fraternity and Sorority, 2015).

Leadership Development Community. Leadership Development Community was a residential learning community where members participated in service projects, peer facilitated discussions, and experiential learning (Res Life, 2015).

Praxis. Praxis was a year-long student driven project for students to put passion into action by providing resources, training, support, and up to $2,000 to develop and implement projects (Praxis, 2015).

Public Achievement. Public Achievement recognized that people of every age have skills, talents, and ideas, and that by learning to work strategically with others, they can solve problems and build sustainable democratic societies. In a school setting, young people form teams to take action on a pubic problem important to them (for example, driving out gang activity or improving classroom space). The team worked with a coach - typically a teacher or college students from Colorado State University - to develop an action plan. Through practice and reflection, team members develop public skills and confidence (PACT, 2015).

Registered Student Organizations. Registered Student Organizations enabled students to form and join clubs to promote common interests for specific educational, professional, social, recreational, or other purposes. The University registered student organizations to equitably allocate training, services, resources, and facilities in coordination of activities (RSO, 2015).

Special Needs Swim. Special Needs Swim builds relationships between student volunteers and community members -- both children and adults with a variety of disabilities.

Each week students and their partners spend an hour in the pool for exercise, games and friendship (SNS, 2015).

T.G.I.F. T.G.I.F. builds relationships between student volunteers and teens in Fort Collins with disabilities. Each month, students and their partners get together on a Friday evening for activities such as bowling, movies, skit night, craft night, or mini-golf (TGIF, 2015).

Employment opportunities. University employment lasting longer than 30 days and included payment for services provided long-term leadership experiences. Specific University employment that focused on positions aimed to develop leadership skills through training and professional experiences were listed here.

Community Desk Manager. Community Desk Managers (CDM) were student manager position in the Department of Residence Life who oversee the operation of a front desk in a residence halls (Res Life, 2015).

Inclusive Community Assistant. Inclusive Community Assistants (ICA) were live-in student staff in Residence Life who provided strategies for, and assisted residents and staff with creating inclusive communities (Res Life, 2015).

Lory Student Center Employees. Lory Student Center ranged from graphic designers to staff assistants to facilities management staff offered through the Bookstore, LSC Business Partners, Campus Activities and Information, Dining and Catering Services, Operations, Marketing, and SLiCE (LSC, 2015).

Orientation Leaders. Orientation Leaders assisted first-year and transfer students in developing academic effectiveness, peer relationships, and personal adjustment to CSU through small and large group discussions, individual peer interactions, and educational presentations (OTP, 2015).

Ram Welcome Leaders. Ram Welcome Leaders served as the primary mentors and role models for new students, families and guests during the four-day Ram Welcome experience with training occurring for an entire semester and the summer prior to Ram Welcome (OTP, 2015).

Resident Assistants. Resident Assistants maintained an atmosphere of academic, personal, and social growth in the residence halls to assist students during their time in college.

Appendix III

MSL 2006 Survey Instrument

"The MSL instrument was administered on the web; in that format items to be skipped did not appear to the respondent if they were not applicable. This version of the MSL instrument was formatted as a paper/pencil version particularly for use in IRB approval processes.

Please be advised that the MSL 2005-2006 instrument is the property of the MSL Research Team and University of Maryland, College Park. *The instrument may not be copied, disseminated, or used in part or in whole, for any purposes without the express written permission of the co-principal investigators.*

NOTE: Shaded sections/ items comprise sub-studies and were not administered to all participants. Approximately 25% of the total sample from each participating campus was selected for each of the sub-studies." **(MSL 2006, CSU Final Report, page 98-106).**

NOTE:

This is a paper and pencil version of what will be presented as an on-line web survey. Skip patterns will automatically take the respondent to the appropriate section. Shaded sections/items will be used in split samples and will not be asked of all participants.

COLLEGE INFORMATION

1. Did you begin college at your current institution or elsewhere? (Choose One)

- o   Started here
- o   Started elsewhere

2. Thinking about this academic term, how would you characterize your enrollment? (Choose One)

- o   Full-Time
- o   Less then Full-Time

3. What is your current class level?   (Choose One)

- o   First year/freshman
- o   Sophomore
- o   Junior
- o   Senior
- o   Graduate student
- o   Other

4. Are you currently working OFF CAMPUS?
(Circle one)   YES   NO

If NO skip to #5

4a. Approximately how many hours do you work off campus in a typical 7 day week?

[   ]

4b. In your primary off campus position, how frequently do you: (Circle one for each item)

1 = Never	3 = Often
2 = Sometimes	4 = Very Often

Perform repetitive tasks	1	2	3	4
Consider options before making decisions	1	2	3	4
Perform structured tasks	1	2	3	4
Have the authority to change the way some things are done	1	2	3	4
Coordinate the work of others	1	2	3	4
Work with others on a team	1	2	3	4

5. Are you currently working ON CAMPUS?
(Circle one)   YES   NO

if NO skip to #6

5a. Approximately how many hours do you work on campus in a typical 7 day week?

[   ]

5b. In your primary position, how frequently do you: (Circle one for each item)

1 = Never	3 = Often
2 = Sometimes	4 = Very Often

Perform repetitive tasks	1	2	3	4
Consider options before making decisions	1	2	3	4
Perform structured tasks	1	2	3	4
Have the authority to change the way some things are done	1	2	3	4
Coordinate the work of others	1	2	3	4
Work with others on a team	1	2	3	4

6. In an average academic term, do you engage in any community service?
     YES   NO

if NO skip to #7

In an average academic term, approximately how many hours do you engage in community service? (circle one for each category).

As part of a class
0   1-5   6-10   11-15   16-20   21-25   26-30

With a student organization
0   1-5   6-10   11-15   16-20   21-25   26-30

As part of a work study experience
0   1-5   6-10   11-15   16-20   21-25   26-30

On your own
0   1-5   6-10   11-15   16-20   21-25   26-30

7. Check all the following activities you engaged in during your college experience.

- o   Studied abroad

- o   Experienced a practicum, internship, field experience, co-op experience, or clinical experience

- o   Participated in a learning community or some other formal program where groups of students take two or more classes together.

- o   Enrolled in a culminating senior experience (capstone course, thesis etc.)

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o None of the above

YOUR PERCEPTIONS BEFORE ENROLLING IN COLLEGE

8. Looking back to *before you started college*, how confident were you that you would be successful at the following: (Circle one response for each.)

| 1 = Not at all confident | 3 = Confident |
| 2 = Somewhat confident | 4 = Very confident |

Handling the challenge of college-level work.. 1   2   3   4

Feeling as though you belong on campus......... 1   2   3   4

Analyzing new ideas and concepts.................. 1   2   3   4

Applying something learned in class to the
"real world".. 1   2   3   4

Enjoying the challenge of learning new
material... 1   2   3   4

Appreciating new and different ideas, beliefs .. 1   2   3   4

Leading others.. 1   2   3   4

Organizing a group's tasks to accomplish
a goal.. 1   2   3   4

Taking initiative to improve something............ 1   2   3   4

Working with a team on a group project 1   2   3   4

9. Looking back to *before you started college*, how often did you engage in the following activities:
(Circle one response for each.)

| 1 = Never | 3 = Often |
| 2 = Sometimes | 4 = Very Often |

Performing volunteer work 1   2   3   4

Participating in student clubs/ groups............... 1   2   3   4

Participating in varsity sports 1   2   3   4

Took leadership positions in student
clubs, groups or sports 1   2   3   4

Participating in community organizations
(e.g. church youth group, scouts)................ 1   2   3   4

Taking leadership positions in community
organizations.. 1   2   3   4

Participating in activism in any form
(e.g. petitions, rally, protest)....................... 1   2   3   4

Getting to know people from backgrounds
different than your own 1   2   3   4

Learning about cultures different from your
own... 1   2   3   4

Participating in training or education that
developed your leadership skills................. 1   2   3   4

10. Looking back to *before you started college*, please indicate your agreement with the following items by choosing the number that most closely represented your opinion about that statement AT THAT TIME:
(Circle one response for each.)

1 = Strongly disagree	4 = Agree
2 = Disagree	5= Strongly Agree
3 = Neutral	

Hearing differences in opinions enriched my
thinking 1 2 3 4 5

I had low self esteem.................................. 1 2 3 4 5

I worked well in changing environments   1 2 3 4 5

I enjoyed working with others toward
common goals................................. 1 2 3 4 5

I held myself accountable for responsibilities
I agree to 1 2 3 4 5

I worked well when I knew the collective
values of a group................................. 1 2 3 4 5

My behaviors reflected my beliefs.................... 1 2 3 4 5

I valued the opportunities that allowed me to
contribute to my community,   1 2 3 4 5

I thought of myself as a leader ONLY if I was
the head of a group (e.g. chair, president) ...1 2 3 4 5

11a. Before you started college, how would you describe the amount of leadership experience you have had (e.g., student clubs, performing groups, service organizations, jobs)? Please circle the appropriate number
No experience 1   2   3   4   5   Extensive experience

11b. Before you started college, how often did others give you positive feedback or encourage your leadership ability (e.g., teachers, advisors, mentors)?
Please circle the appropriate number
Never 1   2   3   4   5   frequently

11c. Before you started college. How would you have reacted to being chosen or appointed the leader of a group? Please circle the appropriate number
Very   1   2   3   4   5   very
uncomfortable   comfortable

11d. Before you started college, how often did you see others be effective leaders?
Please circle the appropriate number
Never 1   2   3   4   5   frequently

11e. Before you started college, how often did you think of yourself as a leader
Please circle the appropriate number
Never 1   2   3   4   5   frequently

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YOUR EXPERIENCE IN COLLEGE

12. How often have you engaged in the following activities during your college experience:
(Circle one for each item)

1 = Never   3 = Often
2 = Sometimes   4 = Very Often

Paid attention to national issues 1   2   3   4

Paid attention to global issues........................... 1   2   3   4

Was aware of the current issues facing the
community surrounding your institution..... 1   2   3   4

Signed a petition or sent an email about a
social or political issue.................................. 1   2   3   4

Bought or did not buy a product or service
because of your views about the social or
political values of the company that produces
or provides it 1   2   3   4

Contacted a public official, newspaper,
magazine, radio, or television talk show to
express your opinion...................................... 1   2   3   4

Took part in a protest, rally, march, or
demonstration... 1   2   3   4

13. Since starting college, how often have you:

been an involved member or active participant in college organizations?
Never 1   2   3   4   5   Much of the time

held a leadership position in a college organization? (for example, serving as an officer or a club or organization, captain of an athletic team, first chair in a musical group, section editor of the newspaper, chairperson of a committee)
Never 1   2   3   4   5   Much of the time

been an involved member or active participant in an off-campus community organization (e.g. PTA, church group)?
Never 1   2   3   4   5   Much of the time

held a leadership position in a community organization? (for example, serving as an officer or a club or organization, leader in a youth group, chairperson of a committee)
Never 1   2   3   4   5   Much of the time

YOUR STUDENT GROUP INVOLVEMENTS

14. Which of the following kinds of student groups have you been involved with during college?
(Check all the categories that apply)

o   Academic/ Departmental/ Professional (e.g., Pre-Law Society, an academic fraternity, Engineering Club)

o   Arts/Theater/Music (e.g., Theater group, Marching Band)

o   Campus-wide programming groups (e.g., program board, film series board, a multicultural programming committee)

o   Cultural/ International (e.g., Black Student Union, German Club)

o   Honor Society (e.g., Omicron Delta Kappa [ODK], Mortar Board, Phi Beta Kappa)

o   Living-learning programs (e.g., language house, leadership floors, ecology halls)

o   Leadership (e.g., Peer Leadership Program, Emerging Leaders Program)

o   Media (e.g., Campus Radio, Student Newspaper)

o   Military (e.g., ROTC)

o   New Student Transitions (e.g., admissions ambassador, orientation advisor)

o   Para professional group (e.g., Resident assistants, peer health educators)

o   Political/ Advocacy (e.g., College Democrats, Students Against Sweatshops)

o   Religious (e.g., Campus Crusades for Christ, Hillel)

o   Service (e.g., Circle K, Alpha Phi Omega [APO])

o   Culturally based fraternities and sororities (e.g., National Pan-Hellenic Council (NPHC) groups such as Alpha Phi Alpha Fraternity Inc., or Latino Greek Council groups such as Lambda Theta Alpha)

o   Social fraternities or sororities (e.g. Panhellenic or Interfraternity Council groups such as Sigma Phi Epsilon or Kappa Kappa Gamma)

o   Sports- Intercollegiate or Varsity (e.g., NCAA Hockey, Varsity Soccer)

o   Sports- Club (e.g., Club Volleyball)

o   Sports- Leisure or Intramural (ex: Intramural flag football, Rock Climbing)

o   Special Interest (ex: Comedy Group)

o   Student governance group (ex: Student Government Association, Residence Hall Association, Interfraternity Council) IF CHECKED go to item 14A

14A. Were you involved in your campus-wide student government association? (Circle one) YES NO

If No, skip to item 15.

Thinking about your student government experience, indicate your level of agreement with the following items:
(Circle one response for each.)

1 = Strongly disagree   4 = Agree
2 = Disagree   5 = Strongly agree
3 = Neutral

I found it hard to represent my constituents'
concerns.. 1 2 3 4 5

I successfully initiated change on behalf of
my constituents (e.g., policy, institutional,
or social) 1 2 3 4 5

My motivation for involvement was about
gaining influence.................................. 1 2 3 4 5

My motivation for involvement was to receive
recognition 1 2 3 4 5

My motivation for involvement was to
help others.. 1 2 3 4 5

I have witnessed effective constituency-based
efforts for change.................................. 1 2 3 4 5

Effective constituency-based efforts for
change have influenced my own actions....... 1 2 3 4 5

I held a constituency-based position prior to
this college SGA experience (e.g. high school
or other governance group) 1 2 3 4 5

Experience with previous constituency
based positions did NOT make me more
effective in my college SGA work 1 2 3 4 5

15. At any time during your college experience, **how often have you been in mentoring relationships where another person intentionally assisted your growth or connected you to opportunities for career and personal development?**
Indicate how many times

Student affairs staff
(e.g., a student organization advisor, career counselor, the Dean of Students, or residence hall coordinator):
.... **never once several many**

Faculty .... **never once several many**

Employers .... **never once several many**

Community members .... **never once several many**
Other students .... **never once several many**

16. During interactions with other students outside of class, how often have you done each of the following in an average school year?   (Circle one for each.)
    1 = Never   3 = Often
    2 = Sometimes   4 = Very Often

Talked about different lifestyles/
customs...................................1 2 3 4

Held discussions with students whose
personal values were very different
from your own 1 2 3 4

Discussed major social issues such as
peace, human rights, and justice.............1 2 3 4

Held discussions with students whose
religious beliefs were very different
from your own 1 2 3 4

Discussed your views about
multiculturalism and diversity...............1 2 3 4

Held discussions with students whose
political opinions were very different
from your own...........................1 2 3 4

DEVELOPING YOUR LEADERSHIP ABILITIES

17. Since starting college, **how many times have you participated in the following types of training or education that developed your leadership skills (ex: courses, Resident Assistant training, organization retreats, job training)** (Circle one for each.)

17a- Short-Term Experiences (ex: individual or one-time workshops, retreats, conferences, lectures, or training)
          Never   once   several   many

17b-Moderate-Term Experiences (ex: a single course, multiple or ongoing retreats, conferences, institutes, workshops, and/or training.
          Never   once   several   many

If NEVER skip to 17c;

Did your experience involve any academic courses?
YES NO

If no, skip to 17c

a.   How many leadership courses have you completed?

b. How many other courses have you taken that contributed to your leadership abilities (e.g. ethics course, personal development courses, management courses)? *Keep in mind you might have taken such a course but it did not contribute to your leadership.*

[ ]

17c- Long-Term Experiences (ex: multi-semester leadership program, leadership certificate program, leadership minor or major, emerging leaders program, living-learning program).
Never   once   several many

if NEVER skip to 18

Which of the following Long-Term Activities did you experience? (check all that apply)

- ○ Emerging or New Leaders Program
- ○ Peer Leadership Program
- ○ Leadership Certificate Program
- ○ Multi-Semester Leadership Program
- ○ Senior Leadership Capstone Experience
- ○ Residential Living-learning leadership program
- ○ Leadership Minor
- ○ Leadership Major
- ○ Other

ASSESSING LEADERSHIP DEVELOPMENT

18. Please indicate your agreement or disagreement with the following items by choosing the number that most closely represents your opinion about that statement.
(Circle one response for each.)

For the statements that refer to a group, think of the most effective, functional group of which you have been a part. This might be a formal organization or an informal study group. For consistency, use the same group in all your responses.

1 = Strongly disagree	4 = Agree
2 = Disagree	5= Strongly Agree
3 = Neutral	

I am open to others' ideas............................ 1 2 3   4   5

Creativity can come from conflict............... 1 2 3   4   5

I value differences in others 1 2 3   4   5

I am able to articulate my priorities............ 1 2 3   4   5

Hearing differences in opinions enriches
my thinking... 1   2   3   4   5

I have low self esteem 1   2   3   4   5

I struggle when group members have
ideas that are different from mine........... 1   2   3   4   5

Transition makes me uncomfortable............ 1   2   3   4   5

I am usually self confident........................... 1   2   3   4   5

I am seen as someone who works
well with others 1   2   3   4   5

Greater harmony can come out of
disagreement... 1   2   3   4   5

I am comfortable initiating new ways of
looking at things 1   2   3   4   5

My behaviors are congruent with my
beliefs.. 1   2   3   4   5

I am committed to a collective purpose in
those groups to which I belong 1   2   3   4   5

It is important to develop a common
direction in a group in order to get
anything done.. 1   2   3   4   5

I respect opinions other than my own 1   2   3   4   5

Change brings new life to an
organization.. 1   2   3   4   5

The things about which I feel passionate
have priority in my life............................ 1   2   3   4   5

I contribute to the goals of the group 1   2   3   4   5

There is energy in doing something a
new way 1   2   3   4   5

I am uncomfortable when someone
disagrees with me................................... 1   2   3   4   5

I know myself pretty well 1   2   3   4   5

I am willing to devote the time and energy
to things that are important to me........... 1   2   3   4   5

I stick with others through difficult
times... 1   2   3   4   5

When there is a conflict between two
people, one will win and the other
will lose... 1   2   3   4   5

Change makes me uncomfortable................ 1   2   3   4   5

It is important to me to act on my beliefs... 1   2   3   4   5

I am focused on my responsibilities............ 1   2   3   4   5

I can make a difference when I work
with others on a task................................ 1   2   3   4   5

I actively listen to what others have to
say 1   2   3   4   5

I think it is important to know other
people's priorities................................... 1   2   3   4   5

My actions are consistent with my values............... 1 2 3 4 5

I believe I have responsibilities to my community............... 1 2 3 4 5

I could describe my personality............... 1 2 3 4 5

I have helped to shape the mission of the group............... 1 2 3 4 5

New ways of doing things frustrate me...... 1 2 3 4 5

Common values drive an organization...... 1 2 3 4 5

I give time to making a difference for someone else............... 1 2 3 4 5

I work well in changing environments....... 1 2 3 4 5

I work with others to make my communities better places............... 1 2 3 4 5

I can describe how I am similar to other people............... 1 2 3 4 5

I enjoy working with others toward common goals............... 1 2 3 4 5

I am open to new ideas............... 1 2 3 4 5

I have the power to make a difference in my community............... 1 2 3 4 5

I look for new ways to do something......... 1 2 3 4 5

I am willing to act for the rights of others............... 1 2 3 4 5

I participate in activities that contribute to the common good............... 1 2 3 4 5

Others would describe me as a cooperative group member............... 1 2 3 4 5

I am comfortable with conflict............... 1 2 3 4 5

I can identify the differences between positive and negative change............... 1 2 3 4 5

I can be counted on to do my part............... 1 2 3 4 5

Being seen as a person of integrity is important to me............... 1 2 3 4 5

I follow through on my promises............... 1 2 3 4 5

I hold myself accountable for responsibilities I agree to............... 1 2 3 4 5

I believe I have a civic responsibility to the greater public............... 1 2 3 4 5

Self-reflection is difficult for me............... 1 2 3 4 5

Collaboration produces better results......... 1 2 3 4 5

I know the purpose of the groups to which I belong............... 1 2 3 4 5

I am comfortable expressing myself.......... 1 2 3 4 5

My contributions are recognized by others in the groups I belong to............... 1 2 3 4 5

I work well when I know the collective values of a group............... 1 2 3 4 5

I share my ideas with others............... 1 2 3 4 5

My behaviors reflect my beliefs............... 1 2 3 4 5

I am genuine............... 1 2 3 4 5

I am able to trust the people with whom I work............... 1 2 3 4 5

I value opportunities that allow me to contribute to my community............... 1 2 3 4 5

I support what the group is trying to accomplish............... 1 2 3 4 5

It is easy for me to be truthful............... 1 2 3 4 5

THINKING MORE ABOUT YOURSELF

19. **How would you characterize your political views?**
(Mark One)
- o   Far left
- o   Liberal
- o   Middle-of-the-road
- o   Conservative
- o   Far right

20. **In thinking about how you have changed during college, to what extent do you feel you have grown in the following areas?** (Circle one response for each.)

| 1 = Not grown at all | 3 = Grown |
| 2 = Grown somewhat | 4 = Grown very much |

Ability to put ideas together and to see relationships between ideas............... 1 2 3 4

Ability to learn on your own, pursue ideas, and find information you need..... 1 2 3 4

Ability to critically analyze ideas and information............... 1 2 3 4

Learning more about things that are new to you............... 1 2 3 4

21. **Please indicate the extent to which you agree or disagree with the following statements.**
(Circle one response for each.)

| 1 = Strongly disagree | 3 = Agree |
| 2 = Disagree | 4 = Strongly agree |

Since coming to college, I have learned a great deal about other racial/ethnic groups............... 1 2 3 4

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I have gained a greater commitment to my
racial/ethnic identity since coming to college .. 1 2 3 4

My campus's commitment to diversity fosters
more division among racial/ethnic groups
than inter-group understanding 1 2 3 4

Since coming to college, I have become aware
of the complexities of inter-group
understanding.. 1 2 3 4

THINKING ABOUT LEADERSHIP

**22. How confident are you that you can be successful at the
following:** (Circle one response for each.)

    1 = Not at all confident   3 = Confident
    2 = Somewhat confident   4 = Very confident

Leading others.. 1 2 3 4

Organizing a group's tasks to accomplish a goal. 1 2 3 4

Taking initiative to improve something................ 1 2 3 4

Working with a team on a group project........ 1 2 3 4

23. To what degree do you agree with these items?
    (Circle one response for each.)

    1 = Strongly disagree
    2 = Disagree
    3 = neither agree or disagree
    4 = Agree
    5 = Strongly agree

It is the responsibility of the head of a group
to make sure the job gets done 1 2 3 4 5

A person can lead from anywhere in the
organization, not just as the head of
the organization 1 2 3 4 5

I spend time mentoring other group
members.. 1 2 3 4 5

I think of myself as a leader ONLY if I am
the head of a group (e.g. chair, president) 1 2 3 4 5

Group members share the responsibility
for leadership.. 1 2 3 4 5

I am a person who can work effectively
with others to accomplish our shared
goals.. 1 2 3 4 5

I do NOT think of myself as a leader
when I am just a member of a group...... 1 2 3 4 5

Leadership is a process all people in the
group do together 1 2 3 4 5

I feel inter-dependent with others in a
group. 1 2 3 4 5

I know I can be an effective member of
any group I choose to join...................... 1 2 3 4 5

Teamwork skills are important in all
organizations 1 2 3 4 5

The head of the group is the leader and
members of the group are followers........1 2 3 4 5

YOUR COLLEGE CLIMATE

24. Select the number that best represents your experience
with your overall college climate

Closed, hostile,   Open, inclusive,
intolerant,   1 2 3 4 5 6 7   supportive,
unfriendly   friendly

BACKGROUND INFORMATION

25. What were your average grades in High School?
(Choose One)

    ○   A or A+
    ○   A- or B+
    ○   B
    ○   B- or C+
    ○   C
    ○   C- or D+
    ○   D or lower

26. Did your high school require community service for
graduation? (Circle One) ....   YES NO

27. What is your age?

    [   ]

28. What is your gender?

    ○   Female
    ○   Male
    ○   Transgender

29. What is your sexual orientation?

    ○   Heterosexual
    ○   Bisexual
    ○   Gay/Lesbian
    ○   Rather not say

30. Indicate your citizenship and/ or generation status:
(Choose One)

    ○   Your grandparents, parents, and you were born in the
        U.S.
    ○   Both of your parents AND you were born in the U.S.
    ○   You were born in the U.S., but at least one of your
        parents was not
    ○   You are a foreign born, naturalized citizen

○ You are a foreign born, resident alien/ permanent resident

○ You are on a student visa

31. Please indicate your racial or ethnic background. (Mark all that apply)
- ○ White/Caucasian
- ○ African American/Black
- ○ American Indian/Alaska Native
- ○ Asian American/Asian
- ○ Native Hawaiian/Pacific Islander
- ○ Mexican American/Chicano
- ○ Puerto Rican
- ○ Cuban American
- ○ Other Latino American
- ○ Multiracial or multiethnic
- ○ Race/ethnicity not included above

32. Do you have a mental, emotional, or physical condition that now or in the past affects your functioning in daily activities at work, school, or home?

               Yes   No

if Yes Please indicate all that apply:

- ○ Deaf/Hard of Hearing
- ○ Blind/Visually Impairment
- ○ Speech/language condition
- ○ Learning Disability
- ○ Physical or musculoskeletal (e.g. multiple sclerosis)
- ○ Attention Deficit Disorder/ Attention Deficit Hyperactivity Disorder
- ○ Psychiatric/Psychological condition (e.g. anxiety disorder, major depression)
- ○ Neurological condition (e.g. brain injury, stroke)
- ○ Medical (e.g. diabetes, severe asthma)
- ○ Other

33. What is your current religious affiliation?
(Choose One)

- ○ None
- ○ Agnostic
- ○ Atheist
- ○ Buddhist
- ○ Catholic
- ○ Hindu
- ○ Islamic
- ○ Jewish
- ○ Mormon
- ○ Quaker
- ○ Protestant (e.g. Baptist, Methodist, Presbyterian)
- ○ Other
- ○ Other Christian
- ○ Rather not say

34. What is your best estimate of your grades so far in college? [Assume 4.00 = A]   (Choose One)

- ○ 3.50 – 4.00
- ○ 3.00 – 3.49

- ○ 2.50 – 2.99
- ○ 2.00 – 2.49
- ○ 1.99 or less
- ○ No college GPA

35. What is the HIGHEST level of formal education obtained by any of your parent(s) or guardian(s)? (Choose one)

- ○ Less than high school diploma or GED
- ○ High school diploma or GED
- ○ Some college
- ○ Associates degree
- ○ Bachelors degree
- ○ Masters degree
- ○ Doctorate or professional degree (e.g., JD, MD, PhD)
- ○ Don't know

36. What is your best estimate of your parent(s) or guardian(s) combined total income from last year? If you are independent from your parents, indicate your income. (Choose one)

- ○ Less than $12,500
- ○ $12,500 - $24,999
- ○ $25,000 – $39,999
- ○ $40,000 – $54,999
- ○ $55,000 - $74,999
- ○ $75,000 - $99,999
- ○ $100,000 - $149,999
- ○ $150,000 - $199,999
- ○ $200,000 and over
- ○ Don't know
- ○ Rather not say

37. Which of the following best describes where are you currently living while attending college? (Choose one)

- ○ Parent/guardian or other relative home
- ○ Other private home, apartment, or room
- ○ College/university residence hall
- ○ Other campus student housing
- ○ Fraternity or sorority house
- ○ Other

INDIVIDUAL CAMPUS ITEMS
1.
2.
3.
4.
5.
6.
7.
8.
9.
10.

Appendix IV

MSL 2009 Survey Instrument

MULTI-INSTITUTIONAL STUDY OF LEADERSHIP 2009 5/12/08 V.9Pilot

NOTE:
This is a paper and pencil version of what will be presented as an on-line web survey. Skip patterns will automatically take the respondent to the appropriate section. Shaded sections/ items will be used in split samples and will not be asked of all participants. Shaded sections may also be all items tested in the pilot and will be reduced to scales for final instrument.

COLLEGE INFORMATION

1. Did you begin college at your current institution or elsewhere? (Choose One)

   o Started here
   o Started elsewhere

2. How would you characterize your enrollment status? (Choose One)

   o Full-Time
   o Less than Full-Time

3. What is your current class level?   (Choose One)

   o Freshman/First-year
   o Sophomore
   o Junior
   o Senior (4th year and beyond)
   o Graduate Student
   o Unclassified

4. Are you currently working OFF CAMPUS in a position unaffiliated with your school?
   (Circle one)   YES   NO
   If NO skip to #5

4a. Approximately how many hours do you work off campus in a typical 7-day week?

5. Are you currently working ON CAMPUS?
   (Circle one)   YES   NO
   if NO skip to #6

5a. Approximately how many hours do you work on campus in a typical 7 day week?

6. In an average month, approximately how many hours do you engage in community service? (circle one for each category).

As part of a class
0 1-5   6-10   11-15   16-20   21-25   26-30   31 or more

As part of a work study experience
0 1-5   6-10   11-15   16-20   21-25   26-30   31 or more

With a campus student organization
0 1-5   6-10   11-15   16-20   21-25   26-30   31 or more

As part of a community organization unaffiliated with your school
0 1-5   6-10   11-15   16-20   21-25   26-30 31 or more

On your own
0 1-5   6-10   11-15   16-20   21-25   26-30   31 or more

7. Check all the following activities you engaged in during your college experience.

   o Studied abroad
   o Participated in a practicum, internship, field experience, co-op experience, or clinical experience
   o Participated in a learning community or other formal program where groups of students take two or more classes together
   o Participated in a   -learning program (ex. language house, leadership floors, ecology halls)
   o Engaged in research with a faculty member
   o Participated in a first year or freshman seminar course
   o Participated in a culminating senior experience (capstone course, thesis etc.)

YOUR PERCEPTIONS BEFORE ENROLLING IN COLLEGE

8. Looking back to *before you started college*, how confident were you that you would be successful in college at the following: (Circle <u>one</u> response for each.)

   1 = Not at all confident   3 = Confident
   2 = Somewhat confident   4 = Very confident

   Handling the challenge of college-level work ...1   2   3   4

   Analyzing new ideas and concepts 1   2   3   4

   Applying something learned in class to the
       "real world" 1   2   3   4

   Enjoying the challenge of learning new
       material 1   2   3   4

   Appreciating new and different ideas, beliefs ...1   2   3   4

   Leading others 1   2   3   4

   Organizing a group's tasks to accomplish
   a goal 1   2   3   4

   Taking initiative to improve something 1   2   3   4

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Working with a team on a group project 1   2   3   4

9. Looking back to _when you were in high school_, how often did you engage in the following activities: (Circle one response for each.)

1 = Never	3 = Often
2 = Sometimes	4 = Very Often

Participated in student government, pep club, or cheerleading.   1 2 3 4

Participated in performing arts activities (like band, orchestra, dance, drama, or art)   1 2 3 4

Participated in academic clubs (like science fair, math club, debate club, foreign language club, chess club, or literary magazine)   1 2 3 4

Participated in organized sports (like intramural, varsity, or club sports)   1 2 3 4

Took leadership positions in student clubs, groups or sports   1 2 3 4

10. Looking back to _before you started college_, how often did you engage in the following activities: (Circle one response for each.)

1 = Never	3 = Often
2 = Sometimes	4 = Very Often

Performed community service   1 2 3 4

Participated in community organizations (ex. church group, scouts)   1 2 3 4

Took leadership positions in community organizations   1 2 3 4

Worked for change in any form (ex. petitions, rally, protest)   1 2 3 4

Participated in training or education that developed your leadership skills   1 2 3 4

11. Looking back to _before you started college_, please indicate your level of agreement with the following items by choosing the number that most closely represented your opinion about that statement: (Circle one response for each.)

1 = Strongly disagree	4 = Agree
2 = Disagree	5= Strongly Agree
3 = Neutral	

Hearing differences in opinions enriched my thinking   1 2 3 4 5

I had low self esteem   1 2 3 4 5

I worked well in changing environments   1 2 3 4 5

I enjoyed working with others toward common goals   1 2 3 4 5

I held myself accountable for responsibilities I agreed to   1 2 3 4 5

I worked well when I knew the collective values of a group   1 2 3 4 5

My behaviors reflected my beliefs   1 2 3 4 5

I valued the opportunities that allowed me to contribute to my community.   1 2 3 4 5

YOUR EXPERIENCES IN COLLEGE

12. How often have you engaged in the following activities during your college experience: (Circle one response for each.)
     1 = Never, 2 = Once, 3 = Sometimes, 4 = Often

Paid attention to campus, local, national or global issues?   1 2 3 4

Contributed money to a charitable cause?   1 2 3 4

Performed community service?   1 2 3 4

Acted to benefit the common good or protect the environment?   1 2 3 4

Been actively involved with an organization that addresses a social or environmental problem?   1 2 3 4

Been actively involved with an organization that addresses the concerns of a specific community (ex: academic council, neighborhood association)?   1 2 3 4

Communicated with campus or community leaders about a pressing concern?   1 2 3 4

Took action in the community to try to address a social or environmental problem?   1 2 3 4

Worked with others to make the campus or community a better place?   1 2 3 4

Acted to raise awareness about a campus, community, or global problem?   1 2 3 4

Signed a petition or sent an email about a social, political or environmental issue?   1 2 3 4

Bought or did not buy a product or service because of your views about the social or political values of the company that produces or provides it   1 2 3 4

Contacted a campus or public official, newspaper, magazine, radio, or television talk show to express your opinion   1 2 3 4

Took part in a protest, rally, march, or demonstration   1 2 3 4

Worked with others to address social inequality   1 2 3 4

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13. <u>Since starting college</u>, how often have you:

been an involved member in <u>college</u> organizations?
Never 1 2 3 4 5 Very often

held a leadership position in a <u>college</u> organization? (ex. serving as an officer in a club or organization, captain of an athletic team, first chair in a musical group, section editor of the newspaper, chairperson of a committee)?
Never 1 2 3 4 5 Very often

been an involved member in an <u>off-campus community</u> organization (ex. Parent-Teacher Association, church group)?
Never 1 2 3 4 5 Very often

held a leadership position in an <u>off-campus community</u> organization? (ex. serving as an officer or a club or organization, leader in a youth group, chairperson of a committee)
Never 1 2 3 4 5 Very often

YOUR STUDENT GROUP INVOLVEMENTS

14. **Which of the following kinds of student groups have you been involved with during college?**
(Check <u>all</u> the categories that apply)

○ Academic/Departmental/Professional (ex. Pre-Law Society, an academic fraternity, Engineering Club)

○ Arts/Theater/Music (ex. Theater group, Marching Band, Photography Club)

○ Campus-Wide Programming Group (ex. program board, film series board, multicultural programming committee)

○ Identity-Based Group (ex. Black Student Union, LGBT Allies, Women's Center, Korean Student Association)

○ International Interest Group (ex. German Club, Foreign Language Club)

○ Honor Society (ex. Omicron Delta Kappa [ODK], Mortar Board, Phi Beta Kappa)

○ Media (ex. Campus Radio, Student Newspaper)

○ Military (ex. ROTC, cadet corps)

○ New Student Transitions (ex. admissions ambassador, orientation advisor)

○ Peer Helper (ex. resident assistants, peer health educators)

○ Political (ex. College Democrats, College Republicans, Libertarians)

○ Advocacy group (ex. Students Against Sweatshops, Amnesty International)

○

○ Religious (ex. Fellowship of Christian Athletes, Hillel)

○ Service (ex. Circle K, Alpha Phi Omega [APO], Habitat for Humanity)

○ Multi-Cultural Fraternities and Sororities (ex. National Pan-Hellenic Council [NPHC] groups such as Alpha Phi Alpha Fraternity Inc., or Latino Greek Council groups such as Lambda Theta Alpha)

○ Social fraternities or sororities (ex. Panhellenic or Interfraternity Council groups such as Sigma Phi Epsilon or Kappa Kappa Gamma)

○ Sports-Intercollegiate or Varsity (ex. NCAA Hockey, Varsity Soccer)

○ Recreational (ex. Climbing Club, Hiking Group)

○ Social/ Special Interest (ex. Gardening Club, Sign Language Club, Chess Club)

○ Sports-Club (ex. Club Volleyball)

○ Sports-Intramural (ex. Intramural flag football)

○ Student governance group (ex. Student Government Association, Residence Hall Association, Interfraternity Council)

15. **A mentor is defined as a person who intentionally assists your growth or connects you to opportunities for career or personal development.**

Since you started at your current college/university, have you been mentored by the following types of people:

Faculty/Instructor	Yes	No
Student Affairs Professional Staff (ex. a student organization advisor, career counselor, the Dean of Students, or residence hall coordinator)	Yes	No
Employer	Yes	No
Community member (not your employer)	Yes	No
Parent/ Guardian	Yes	No
Other student	Yes	No

IF NO for all of the above, skip to Question 16.

How many times <u>during your college experience</u>, have you been in mentoring relationships with those in the following groups?
1 = Never   3 = Often
2 = Sometimes   4 = Very Often

Faculty/Instructor	1 2 3 4
Student Affairs Professional Staff (ex. a student organization advisor, career counselor, the Dean of Students, or residence hall coordinator)	1 2 3 4

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Employer   1 2 3 4
Community member (not your employer)   1 2 3 4
Parent/ Guardian   1 2 3 4
Other student   1 2 3 4

When thinking about your most significant mentor at this college/university, what was this person's gender?
- o Female
- o Male
- o Transgender

When thinking about your most significant mentor at this college/university, what was this person's race/ethnicity?
- o White/ Caucasian
- o Middle Eastern
- o African American/ Black
- o Native American
- o Asian American/ Pacific Islander
- o Latino/ Hispanic
- o Mulitracial
- o Unsure

When thinking of your most significant mentor at this college/university, indicate your level of agreement or disagreement with the following:

    1 = Strongly disagree   4 = Agree
    2 = Disagree   5= Strongly Agree
    3 = Neutral

Be more inclusive of views different than my own	1 2 3 4 5
Empower others to engage in leadership	1 2 3 4 5
Engage in ethical leadership	1 2 3 4 5
Develop skills to work with others toward a common purpose	1 2 3 4 5
Be comfortable with conflict in groups	1 2 3 4 5
Feel committed to the activities I engage in	1 2 3 4 5
Understand my priorities	1 2 3 4 5
Feel capable of making a difference in my community	1 2 3 4 5
Live up to my potential	1 2 3 4 5
Be a positive role model	1 2 3 4 5
Work better with others	1 2 3 4 5
Live my values	1 2 3 4 5
Mentor others	1 2 3 4 5
Value working with others from diverse backgrounds	1 2 3 4 5
Be open to new experiences	1 2 3 4 5
Develop problem-solving skills	1 2 3 4 5
Identify areas for self-improvement	1 2 3 4 5

16. During interactions with other students outside of class, how often have you done each of the following in an average school year?   (Circle one for each.)

    1 = Never   3 = Often
    2 = Sometimes   4 = Very Often

Talked about different lifestyles/ customs	1 2 3 4
Held discussions with students whose personal values were very different from your own	1 2 3 4
Discussed major social issues such as peace, human rights, and justice	1 2 3 4
Held discussions with students whose religious beliefs were very different from your own	1 2 3 4
Discussed your views about multiculturalism and diversity	1 2 3 4
Held discussions with students whose political opinions were very different from your own	1 2 3 4

YOUR THOUGHTS IN A VARIETY OF SITUATIONS

17. The following statements inquire about your thoughts and feelings in a variety of situations. For each item, be as honest as possible in indicating how well it describes you.

ANSWER SCALE:

1	2	3	4	5
Does not describe me well				Describes me very well

I often have tender, concerned feelings for people less fortunate than me.	1 2 3 4 5
I sometimes find it difficult to see things from the other person's point of view.	1 2 3 4 5
Sometimes I don't feel very sorry for other people when they are having problems.	1 2 3 4 5
I try to look at everybody's side of a disagreement before I make a decision.	1 2 3 4 5
When I see someone being taken advantage of, I feel kind of protective towards them.	1 2 3 4 5
I sometimes try to understand my friends better by imagining how things look from their perspective.	1 2 3 4 5
Other people's misfortunes do not usually disturb me a great deal.	1 2 3 4 5
If I'm sure I'm right about something, I don't waste much time listening to other people's arguments.	1 2 3 4 5
When I see someone being treated unfairly, I	1 2 3 4 5

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sometimes don't feel very much pity for them.

I am often quite touched by things that I see happen.   1 2 3 4 5

I believe that there are two sides to every question and try to look at them both.   1 2 3 4 5

I would describe myself as a pretty soft-hearted person.   1 2 3 4 5

When I'm upset at someone, I usually try to "put myself in their shoes" for a while.   1 2 3 4 5

Before criticizing somebody, I try to imagine how I would feel if I were in their place.   1 2 3 4 5

DEVELOPING YOUR LEADERSHIP ABILITIES

18. Since starting college, have you ever participated in a leadership training or leadership education experience (ex: leadership conference, alternative spring break, leadership course, club president's retreat…)?   Yes No

IF NO, SKIP:
Since starting college, to what degree have you been involved in the following types of leadership training or education?

1 = Never	3 = Sometimes
2 = Once	4 = Often

Leadership Conference	1 2 3 4
Leadership Retreat	1 2 3 4
Leadership Certificate Program	1 2 3 4
Leadership Lecture/Workshop Series	1 2 3 4
Positional leader training (ex. Treasurer's training, Resident Assistant training, Student Government training)	1 2 3 4
Leadership Capstone Experience	1 2 3 4
Leadership Course	1 2 3 4
Leadership Minor	1 2 3 4
Leadership Major	1 2 3 4
Alternative Spring Break	1 2 3 4
Emerging or New Leaders Program	1 2 3 4
Living-Learning Leadership Program	1 2 3 4
Peer Leadership Educator Program	1 2 3 4
Outdoor Leadership Program	1 2 3 4
Women's Leadership Program	1 2 3 4
Multicultural Leadership Program	1 2 3 4

IF ANY RESPONSE MORE THAN "NONE AT ALL" FOR ANY ITEM SKIP TO THIS SCREEN FOR THOSE ITEMS:

Since starting college, to what extent has participation in the following types of training or education assisted in the development of your leadership ability.

1 = Not at all	3 = Moderately
2 = Minimally	4= A Great Deal

Leadership Conference	1 2 3 4

Leadership Retreat	1 2 3 4
Leadership Certificate Program	1 2 3 4
Leadership Lecture/Workshop Series	1 2 3 4
Positional leader training (ex: Treasurer's training, Resident Assistant training, Student Government training)	1 2 3 4
Leadership Capstone Experience	1 2 3 4
Leadership Course	1 2 3 4
Leadership Minor	1 2 3 4
Leadership Major	1 2 3 4
Alternative Spring Break	1 2 3 4
Emerging or New Leaders Program	1 2 3 4
Living-Learning Leadership Program	1 2 3 4
Peer Leadership Educator Program	1 2 3 4
Outdoor Leadership Program	1 2 3 4
Women's Leadership Program	1 2 3 4
Multicultural Leadership Program	1 2 3 4

ASSESSING LEADERSHIP DEVELOPMENT

19. Please indicate your agreement or disagreement with the following items by choosing the number that most closely represents your current opinion about that statement. (Circle one response for each.)

For the statements that refer to a group, think of the most effective, functional group of which you have been a part. This might be a formal organization or an informal study group. For consistency, use the same group in all your responses.

1 = Strongly disagree	4 = Agree
2 = Disagree	5= Strongly Agree
3 = Neutral	

I am open to others' ideas	1 2 3 4 5
Creativity can come from conflict	1 2 3 4 5
I value differences in others	1 2 3 4 5
I am able to articulate my priorities	1 2 3 4 5
Hearing differences in opinions enriches my thinking	1 2 3 4 5
I have low self esteem	1 2 3 4 5
I struggle when group members have ideas that are different from mine	1 2 3 4 5
Transition makes me uncomfortable	1 2 3 4 5
I am usually self confident	1 2 3 4 5
I am seen as someone who works well with others	1 2 3 4 5
Greater harmony can come out of disagreement	1 2 3 4 5
I am comfortable initiating new ways of looking at things	1 2 3 4 5
My behaviors are congruent with my	1 2 3 4 5

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beliefs

I am committed to a collective purpose in those groups to which I belong	1 2 3 4 5
It is important to develop a common direction in a group in order to get anything done	1 2 3 4 5
I respect opinions other than my own	1 2 3 4 5
Change brings new life to an organization	1 2 3 4 5
The things about which I feel passionate have priority in my life	1 2 3 4 5
I contribute to the goals of the group	1 2 3 4 5
There is energy in doing something a new way	1 2 3 4 5
I am uncomfortable when someone disagrees with me	1 2 3 4 5
I know myself pretty well	1 2 3 4 5
I am willing to devote the time and energy to things that are important to me	1 2 3 4 5
I stick with others through difficult times	1 2 3 4 5
When there is a conflict between two people, one will win and the other will lose	1 2 3 4 5
Change makes me uncomfortable	1 2 3 4 5
It is important to me to act on my beliefs	1 2 3 4 5
I am focused on my responsibilities	1 2 3 4 5
I can make a difference when I work with others on a task	1 2 3 4 5
I actively listen to what others have to say	1 2 3 4 5
I think it is important to know other people's priorities	1 2 3 4 5
My actions are consistent with my values	1 2 3 4 5
I believe I have responsibilities to my community	1 2 3 4 5
I could describe my personality	1 2 3 4 5
I have helped to shape the mission of the group	1 2 3 4 5
New ways of doing things frustrate me	1 2 3 4 5
Common values drive an organization	1 2 3 4 5
I give time to making a difference for someone else	1 2 3 4 5
I work well in changing environments	1 2 3 4 5
I work with others to make my communities better places	1 2 3 4 5
I can describe how I am similar to other people	1 2 3 4 5

I enjoy working with others toward common goals	1 2 3 4 5
I am open to new ideas	1 2 3 4 5
I have the power to make a difference in my community	1 2 3 4 5
I look for new ways to do something	1 2 3 4 5
I am willing to act for the rights of others	1 2 3 4 5
I participate in activities that contribute to the common good	1 2 3 4 5
Others would describe me as a cooperative group member	1 2 3 4 5
I am comfortable with conflict	1 2 3 4 5
I can identify the differences between positive and negative change	1 2 3 4 5
I can be counted on to do my part	1 2 3 4 5
Being seen as a person of integrity is important to me	1 2 3 4 5
I follow through on my promises	1 2 3 4 5
I hold myself accountable for responsibilities I agree to	1 2 3 4 5
I believe I have a civic responsibility to the greater public	1 2 3 4 5
Self-reflection is difficult for me	1 2 3 4 5
Collaboration produces better results	1 2 3 4 5
I know the purpose of the groups to which I belong	1 2 3 4 5
I am comfortable expressing myself	1 2 3 4 5
My contributions are recognized by others in the groups I belong to	1 2 3 4 5
I work well when I know the collective values of a group	1 2 3 4 5
I share my ideas with others	1 2 3 4 5
My behaviors reflect my beliefs	1 2 3 4 5
I am genuine	1 2 3 4 5
I am able to trust the people with whom I work	1 2 3 4 5
I value opportunities that allow me to contribute to my community	1 2 3 4 5
I support what the group is trying to accomplish	1 2 3 4 5
It is easy for me to be truthful	1 2 3 4 5
It is important to me that I play an active role in my communities	1 2 3 4 5
I volunteer my time to the community	1 2 3 4 5

I believe my work has a greater purpose for the larger community   1 2 3 4 5

Ordinary people can make a difference in their community   1 2 3 4 5

I value opportunities that allow me to contribute to my community   1 2 3 4 5

Thinking More About Yourself

20. How would you characterize your political views? (Mark One)
    - o   Very liberal
    - o   Liberal
    - o   Moderate
    - o   Conservative
    - o   Very conservative

21. In thinking about how you have changed <u>during college</u>, to what extent do you feel you have grown in the following areas? (Circle <u>one</u> response for each.)

    1 = Not grown at all   3 = Grown
    2 = Grown somewhat   4 = Grown very much

Ability to put ideas together and to see relationships between ideas......................1   2   3   4

Ability to learn on your own, pursue ideas, and find information you need......1   2   3   4

Ability to critically analyze ideas and information...................................1   2   3   4

Learning more about things that are new to you...................................1   2   3   4

THINKING ABOUT LEADERSHIP

22. How confident are you that you can be successful at the following: (Circle <u>one</u> response for each.)

    1 = Not at all confident   3 = Confident
    2 = Somewhat confident   4 = Very confident

Leading others..   1 2 3 4
Organizing a group's tasks to accomplish a goal...   1 2 3 4
Taking initiative to improve something...........   1 2 3 4
Working with a team on a group project.........   1 2 3 4

YOUR COLLEGE CLIMATE

23. Indicate your level of agreement with the following statements about your experience on your current campus

    1 = Strongly Disagree   4 = Agree
    2 = Disagree   5 = Strongly Agree
    3 = Neutral

I feel valued as a person at this school   1 2 3 4 5

I feel accepted as a part of the campus community   1 2 3 4 5

There is a strong commitment to diversity on this campus   1 2 3 4 5

I have observed discriminatory words, behaviors or gestures directed at people like me   1 2 3 4 5

I feel I belong on this campus   1 2 3 4 5

I often do not feel supported on this campus   1 2 3 4 5

I feel safe and secure on campus   1 2 3 4 5

I feel like I am treated fairly on campus   1 2 3 4 5

Faculty care about me and my experiences   1 2 3 4 5

This university provides an environment for the open expression of ideas, opinions, and beliefs   1 2 3 4 5

I have encountered discrimination while attending this institution   1 2 3 4 5

I feel there is a general atmosphere of prejudice among students   1 2 3 4 5

The institution's traditions and celebrations play an important role in my life as a student   1 2 3 4 5

I am proud of this institution's history and heritage   1 2 3 4 5

<u>Faculty</u> have discriminated against people like me   1 2 3 4 5

<u>Staff</u> have discriminated against people like me   1 2 3 4 5

I have developed close personal relationships with other students   1 2 3 4 5

Select the number that best represents <u>your experience</u> with your overall college climate

| Closed, hostile, intolerant, unfriendly | 1 2 3 4 5 6 7 | Open, inclusive, supportive, friendly |

MORE ABOUT YOU

SPIRITUALITY

25. How often do you…..

| 1= Never | 3 = Often |
| 2= Sometimes | 4 = Very often |

Search for meaning/purpose in your life	1 2 3 4
Have discussions about the meaning of life with your friends	1 2 3 4
Surround yourself with friends who are searching for meaning/purpose in life	1 2 3 4
Reflect on finding answers to the mysteries of life	1 2 3 4
Feel that you attain inner harmony	1 2 3 4
Seek beauty in life	1 2 3 4
Think about developing a meaningful philosophy of life	1 2 3 4
Act on being a more loving person	1 2 3 4
Find meaning in times of hardship	1 2 3 4
Feel good about the direction in which your life is headed	1 2 3 4
Feel thankful for all that has happened to you	1 2 3 4

BACKGROUND INFORMATION

26. Which of the following most closely describes your major fields of study? (Select the category that best represents your field of study)
- Agriculture
- Biological/ Life Sciences (biology, biochemistry, botany, zoology, etc.)
- Business (accounting, business administration, marketing, management, etc.)
- Communication (speech, journalism, television/radio, etc.)
- Computer and Information Sciences
- Education
- Engineering
- Ethnic, Cultural Studies, and Area Studies
- Foreign Languages and Literature (French, Spanish, etc.)
- Health-Related Fields (nursing, physical therapy, health technology, etc.)
- History
- Humanities (English, Literature, Philosophy, Religion, etc.)
- Liberal/ General Studies
- Mathematics

- Multi/ Interdisciplinary studies (international relations, ecology, environmental studies, etc.)
- Parks, Recreation, Leisure Studies, Sports Management
- Physical Sciences (physics, chemistry, astronomy, earth science, etc.)
- Pre-Professional (pre-dental, pre-medical, pre-veterinary, etc.)
- Public Administration (city management, law enforcement, etc.)
- Social Sciences (anthropology, economics, political science, psychology, sociology, etc.)
- Visual and Performing Arts (art, music, theater, etc.)
- Undecided

27. Did your high school require community service for graduation? (Select One) ……………YES NO

28. What is your age?

29. What is your gender?

- Female
- Male
- Transgender

If Transgender is selected, SKIP to a screen with:
Please indicate which of the following best describe you:
- Female to male
- Male to female
- Intersexed
- Rather not say

30. What is your sexual orientation?

- Heterosexual
- Bisexual
- Gay/Lesbian
- Questioning
- Rather not say

31. Indicate your citizenship and/ or generation status: (Choose One)

- Your grandparents, parents, <u>and</u> you were born in the U.S.
- Both of your parents AND you were born in the U.S.
- You were born in the U.S., but at least one of your parents was not
- You are a foreign born, naturalized citizen
- You are a foreign born, resident alien/ permanent resident
- You are an international student

32. Please indicate your broad racial group membership (Mark all that apply).

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1=White/ Caucasian
2=Middle Eastern
3=African American/ Black
4=American Indian/ Alaska Native
5=Asian American/ Asian
6=Latino/ Hispanic
7=Multiracial
8=Race/ Ethnicity not included above

[Researcher note: 1) This next question only pertains to those that mark responses of Af. Am/ Black, Asian, Latino, or Multiracial above; 2) The response options that appear should reflect just those that correspond with their broader racial group memberships.]

Please indicate your ethnic group memberships (Mark all that apply).

African American/ Black
  1=Black Caribbean
  2=Black African
Asian American/ Asian
  3=Chinese
  4=East Indian/Pakistani
  5=Japanese
  6=Korean
  7=Filipino
  8=Pacific Islander
  9=Vietnamese
  10=Other Asian
Latino/ Hispanic
  11=Mexican/ Chicano
  12=Puerto Rican
  13=Cuban
  14=Dominican
  15=South American
  16=Central American
  17=Other Latino
18=Race/ Ethnicity not included above

CONSIDERING YOUR RACE OR ETHNICITY

33. We are all members of different social groups or social categories. We would like you to consider your BROAD racial group membership (ex. White, Middle Eastern, Native American, African American/ Black, Asian American/ Pacific Islander, Latino/ Hispanic, Multiracial) in responding to the following statements. There are no right or wrong answers to any of the statements; we are interested in your honest reactions and opinions.

Please read each statement carefully, and respond by using the following scale from 1 to 7:

1 = Strongly Disagree   5 = Agree Somewhat
2 = Disagree   6 = Agree
3 = Disagree Somewhat   7 = Strongly Agree
4 = Neutral

I am a worthy member of my race/ ethnic group.   1 2 3 4 5 6 7

I often regret that I belong to my racial/ ethnic group.   1 2 3 4 5 6 7

Overall, my racial/ethnic group is considered good by others.   1 2 3 4 5 6 7

Overall, my race/ethnicity has very little to do with how I feel about myself.   1 2 3 4 5 6 7

I feel I don't have much to offer to my racial/ethnic group.   1 2 3 4 5 6 7

In general, I'm glad to be a member of my racial/ethnic group.   1 2 3 4 5 6 7

Most people consider my racial/ethnic group, on the average, to be more ineffective than other groups.   1 2 3 4 5 6 7

The racial/ethnic group I belong to is an important reflection of who I am.   1 2 3 4 5 6 7

I am a cooperative participant in the activities of my racial/ethnic group.   1 2 3 4 5 6 7

Overall, I often feel that my racial/ ethnic group is not worthwhile.   1 2 3 4 5 6 7

In general, others respect my race/ ethnicity.   1 2 3 4 5 6 7

My race/ethnicity is unimportant to my sense of what kind of a person I am.   1 2 3 4 5 6 7

I often feel I am a useless member of my racial/ethnic group.   1 2 3 4 5 6 7

I feel good about the race/ethnic group I belong to.   1 2 3 4 5 6 7

In general, others think that my racial/ethnic group is unworthy.   1 2 3 4 5 6 7

In general, belonging to my race/ ethnic group is an important part of my self image.   1 2 3 4 5 6 7

34. Do you have any of the following conditions:
a. Blindness, deafness, or a severe vision or hearing impairment
b. A condition that substantially limits one or more basic physical activities such as walking, climbing stairs, reaching, lifting, or carrying?
c. A mental or emotional condition lasting 6 months or more?
d. A condition that affects your learning or concentration? (YES/NO)

If Yes Please indicate all that apply:

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- Deaf/Hard of Hearing
- Blind/Visually Impaired
- Speech/language condition
- Learning Disability
- Physical or musculoskeletal (ex. multiple sclerosis)
- Attention Deficit Disorder/ Attention Deficit Hyperactivity Disorder
- Psychiatric/Psychological condition (ex. anxiety disorder, major depression)
- Neurological condition (ex. brain injury, stroke)
- Medical (ex. diabetes, severe asthma)
- Other

35. What is your current religious preference? (Mark all that apply)

- Agnostic
- Atheist
- Baptist
- Buddhist
- Church of Christ
- Eastern Orthodox
- Episcopalian
- Hindu
- Islamic
- Jewish
- LDS (Mormon)
- Lutheran
- Methodist
- Presbyterian
- Quaker
- Roman Catholic
- Seventh Day Adventist
- Unitarian/Universalist
- UCC/Congregational
- Other Christian
- Other Religion
- None
- Other

36. What is your best estimate of your grades so far in college? [Assume 4.00 = A]   (Choose One)

- 3.50 – 4.00
- 3.00 – 3.49
- 2.50 – 2.99
- 2.00 – 2.49
- 1.99 or less
- No college GPA

37. What is the <u>HIGHEST</u> level of formal education obtained by any of your parent(s) or guardian(s)? (Choose one)

- Less than high school diploma or less than GED
- High school diploma or GED
- Some college
- Associates degree
- Bachelors degree
- Masters degree
- Doctorate or professional degree (ex. JD, MD, PhD)

- Don't know

38. What is your <u>best estimate</u> of your parent(s) or guardian(s) combined total income from last year? If you are independent from your parents, indicate your income.
(Choose one)

- Less than $12,500
- $12,500 - $24,999
- $25,000 – $39,999
- $40,000 – $54,999
- $55,000 - $74,999
- $75,000 - $99,999
- $100,000 - $149,999
- $150,000 - $199,999
- $200,000 and over
- Don't know
- Rather not say

39. Which of the following best describes where you are currently living while attending college? (Choose one)

- Parent/guardian or other relative home
- Other off-campus home, apartment, or room
- College/university residence hall
- Other on-campus student housing
- Fraternity or sorority house
- Other

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Appendix V

MSL 2012 Changes to Survey Instrument

MSL 2012 Changes to Survey Instrument and Report

Every three years the MSL Research Team makes changes to the primary survey instrument. You likely noted some of these changes in preparing for the administration of the instrument to your students. All changes reflect the evolving findings that emerge from previous years' data collections along with feedback from participating campuses. This document outlines some of the major changes made in MSL 2012.

- *Removal of Change Scale*: The Socially Responsible Leadership Scale (SRLS) is comprised of eight separate scales including a measure of change. The Change Scale was originally included to capture the change portion of the social change model, but the items more accurately reflect comfort with transition. The Omnibus SRLS offers a more accurate measure of an individual's overall capacity for socially responsible leadership. Additionally, change is not one of the seven C's conceptualized in the original social change model. Therefore, this scale was removed.
- *Fewer SRLS Items*: Significant work was conducted over the past three years to improve the psychometric rigor of the MSL. This included extensive work with the SRLS and has led to a significant reduction in the total number of items used to measure each of the scales.
- *Addition of Resiliency Scale*: Connor and Davison (2003) defined resilience as "the personal qualities that enable one to thrive in the face of adversity" (p. 76) and a "measure of successful stress-coping ability" (p. 77). Literature identifies resiliency as an important factor in leadership development, particularly for those from under-represented and marginalized backgrounds. Therefore, the short version of the Connor-Davidson Resilience Scale was added to the MSL to understand how resilience affects leadership development. It may also be a useful outcome measure for schools to study in its own right.
- *Addition of Aspirations Scale*: Leadership aspirations reflect "the degree to which people] aspire to leadership positions and continued education within their careers" (Gray & O'Brien, 2007, p. 318) and represent a form of motivation for leadership. The Leadership Aspirations Scales were added to the main instrument to understand their potential affect on outcomes as well as contextualize leadership development within particular academic disciplines. This scale is comprised of two sub-scales (i.e., leadership aspirations and educational aspirations) which can be reported as a total score or separate sub-scores. Although both scales are available in your raw data, only results from the Leadership Aspirations Scale are described in the institutional reports.
- *Social Perspective-Taking Scale Moved to the Main Instrument*: – Social perspective-taking (SPT) is understood as "the ability to take another person's point of view and accurately infer the thoughts and feelings of others (Dugan, Bohle, Woelker, & Cooney, under review). SPT serves as a critical mediator of students' abilities to integrate individual level leadership capacities with group level capacities. As such, it was moved from being a sub-study and administered to the entire sample in the 2012 study.

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Appendix VI

Scale Reliabilities

(Note: Chronbach alphas were calculated using the national random sample. Alpha levels may differ slightly for each individual campus.)

CATEGORY OF DATA	SCALE	VARIABLE LABEL	RELIABILITY
PRE-TESTS	Cognitive Development Pretest*	Precog	.79
	Diversity Outcomes Pretest	prediv	.88
	Leadership Efficacy Pretest	preeff	.86
	Pre-antecedents for leadership scale	preant	.82
OTHER INPUTS	Pre-involvement scale: on campus	prinon	.71
	Pre-involvement scale: off campus	prinof	.77
ENVIRONMENT	College Activism Scale (active)	actact	.75
	College Activism Scale (passive)	pasact	.81
	Diversity Discussions	divdis	.90
OUTCOMES	Leadership Efficacy Post Test	outeff	.88
	Diversity Appreciation Scale	outdiv	.73
	Cognitive Development Post test*	outcog	.85
	LID Scale (stage 3)*	Lid3	.73
	LID Scale (stage 4)*	Lid4	.76
	Consciousness of Self	Self	.79
	Congruence	Congru	.80
	Commitment	Commit	.83
	Collaboration	Collab	.82
	Common Purpose	Common	.82
	Controversy with Civility	Civil	.77
	Citizenship	Citzen	.77
	Change	change	.81

* These scales were used as sub-studies and are not available for the entire sample. Approximately 25% of the participants from your institutional sample were invited to respond to these questions.