

DISSERTATION

FACTORS THAT INFLUENCE LEADER IDENTITY DEVELOPMENT
IN COLLEGE STUDENTS

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ABSTRACT

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In the present study, I explore the extent to which college students who take a leadership theory course experience a change in their leader identity. As a secondary area of focus, I also explore if students taking a leadership theory course experience changes in their self-perceptions on constructs such as motivation to lead, leadership self-efficacy, leader developmental efficacy, and attitudes and beliefs about leadership. Research has shown that one's self-concept as a leader or one's "leader identity" influences the leadership opportunities in which he or she chooses to participate (Day & Harrison, 2007). Studies have also shown that leader self-efficacy can influence a student's desire to engage in leadership activities (Dugan, Garland, Jacoby, & Gasiorski, 2008; McCormick & Tanguma, 2007). Leadership self-efficacy and systemic attitudes and beliefs increased over the course of semester-long leadership theory course; while data did not show changes in one's leader identity, motivation to lead, or leader developmental efficacy over the same period of time. Leadership self-efficacy and developmental self-efficacy combined predicted leader identity to the .08 significance level; however, these results should be interpreted with caution in that they only explained 4% of the variance. There were no differences by gender for pretest and posttest scores of students taking a leadership theory class. In addition, there was not a difference between the experimental and comparison group in part due to a small sample size.

Keywords: leader, leader identity, college student development, efficacy, leadership self-efficacy, developmental self-efficacy, motivation to lead, systemic vs. hierarchical attitudes and beliefs

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CHAPTER 1: INTRODUCTION

As a concept, identity is complex; it includes how a person sees oneself as well as how one notices the interactions between the self and others (Hall, 2004). “Our [perceived] self-concept or identity has profound effects on the way we feel, think, and behave, and for the things we aim to achieve” (van Knippenberg, D., van Knippenberg, B., De Cremer, & Hogg, 2004, p. 827). Leader identity, a sub-component of one’s identity, influences how a person thinks of oneself as a leader (Day & Harrison, 2007; Hall, 2004). A leader’s identity is considered to be one of the most important aspects of leader development (Hall, 2004). The more salient a person’s leader identity is, the more likely he or she is going to engage in experiences and opportunities that develop the self (Day & Harrison, 2007). Therefore, it is critical that individuals, particularly college students, develop their self-concept as a leader.

Currently, leader and leadership development experiences at colleges and universities provide students with knowledge and skills that support their personal development (Zimmerman-Oster, 1999). However, recent theoretical explorations on leader development have identified the need to expand current thinking beyond specific behavioral and skill areas to include one’s self-view as a leader, as well as the cognitive structures a person uses to access leadership knowledge (Lord & Hall, 2005; Ibarra, Snook, & Guillen Ramo, 2010; DeRue & Ashford, 2010; Day & Harrison, 2007). In order for students to cultivate their self-concepts as leaders, the literature suggests incorporating cognitive development and the development of meta-competencies, such as self-awareness (Lord & Hall, 2005). Therefore, this study explored the relationship between a college student’s leader identity and the cognitive structure of an individual’s self-awareness, motivation to lead, leader self-efficacy, and developmental self-efficacy.

Additionally, students often enter college with a very limited, hierarchal view of leadership (Wielkiewicz, 2000; Komives, Owen, Longbeam, Mainella, & Osteen, 2005). Broadening students' understanding of leadership knowledge through academic courses may have the potential to shift students' implicit leadership theories from traditional, hierarchical, and positional models to non-traditional, collaborative, and systems-wide models. Hackman and Wageman (2007) described the importance of engaging in research that explores "how leaders can be helped to learn" versus focusing solely on the topics and lessons that should be incorporated into programs and courses. As such, an important area of this study explored the relationship between identity development and the educational process of taking a leadership theory course.

It is essential that leader development opportunities for students move beyond skill-development to include greater self-awareness, a more articulated leader identity, and a more complex understanding of how to engage in leadership experiences (Day, Harrison, & Halpin, 2009). As a result, helping college students expand their definition of "leader" and encouraging the development of a leader identity may shape the goals, aspirations, and actions of students. Thus, leader development programs in higher education maintain the potential to enhance self-awareness and self-understanding within students, which in turn increases students' effectiveness as a leader.

Purpose of the Study

The purpose of this study was to explore the extent to which the constructs (motivation to lead, leadership self-efficacy, developmental self-efficacy, and systemic vs. hierarchical leadership attitudes and beliefs) predicted a change in leader identity for college students registered in an

introductory leadership theory course. As such, the following research questions guided this study:

Research Questions:

1. Were there differences in students' pre-test and post-test scores at the beginning and the end of a leadership class when comparing the constructs (motivation to lead, leadership self-efficacy, developmental self-efficacy, systemic vs. hierarchical attitudes and beliefs about leadership) in regard to a students' leader identity?
2. Was there a statistically significant difference between males and females on their pre-test and post-test identity score?
3. To what extent did the constructs (motivation to lead, leadership self-efficacy, developmental self-efficacy, systemic vs. hierarchical attitudes and beliefs about leadership) predict leader identity?
4. Were there differences among the three course-sections of leadership classes and the gain/loss score on a students' leader identity?
5. Was there a difference in students' leader identity scores between the students who participated in the introductory leadership theory course and those who participated in the organizational psychology class?

Definition of Terms:

- *Identity*: our self-concept; the knowledge a person has about him or herself (Leary & Tangney, 2003; van Knippenberg, D. et al., 2004).
- *Leader identity*: "knowledge, experiences, and self-perceptions" ...which are "built through the integration of learning and leading experiences with the self" (Day et al., 2009, p. 184-185).

- *Self*: “is a knowledge structure that helps people organize and give meaning to memory and behavior” (van Knippenberg, D. et al., 2004, p. 827).
- *Leader identity-development spirals*: capture the general trend of development, but numerous factors influence the strength, acceleration, and direction of such spirals” (Day et al., 2009, p.186)
- *Motivation*: “within-person processes that predict the direction, intensity, and persistence of behavior” (Chan & Drasgow, 2001, p. 482).
- *Motivation to lead*: “individual differences construct that affects a leader’s or leader-to-be’s decision to assume leadership training, roles, and responsibilities and that affect his or her intensity of effort at leading and persistence of the leader” (Chan & Drasgow, 2001, p. 482).
- *Self-efficacy*: “beliefs in one’s capabilities to organize and execute the courses of action required to produce given attainments” (Bandura, 1997, p. 3).
- *Leader self-efficacy*: “leader’s estimate of his or her ability to fulfill the leadership role” (Murphy & Ensher, 1999, p. 1376).
- *Implicit leadership theory (ILT)*: cognitive schemas; framework for organizing thoughts and perceptions about engaging in leadership behavior; for the individual, when the need for leadership arises, each person acts upon his or her on cognitive schemas or implicit leadership theories (ILT) to decide which, if any, leadership behaviors he or she will use (DeRue, Ashford, & Cotton, 2009; Lord, 1985).
- *Hierarchical thinking*: “suggests that organizations should be organized in a stable hierarchical manner with power and control focused in the upper levels of the hierarchy” (Wielkiewicz, 2000, p. 341).

- *Systemic thinking*: “an ability to relate a variety of ideas and concepts to organizational success, such as ethics, the need for cooperation of all individuals to help the organization accomplish goals, the need for long-term thinking, and the need for organizational learning” (Wielkiewicz, 2000, p. 341).

Delimitations

This study was restricted to a sample of undergraduate students taking one of two leadership theory courses at two institutions of higher education in the Midwest and western United States. The students who were enrolled in these courses self-selected into the course. These students may have been taking the course to pursue a minor in leadership studies, and have diverse characteristics (i.e. freshman through senior standing, gender, race, domestic or international student). The courses offered at each institution used a similar pedagogical structure for the course.

Assumptions and Limitations

By exposing students to a broad array of leadership theories, I assumed that his or her leader identity would expand or become more all-encompassing. Therefore, as part of this research design, I was interested in learning if taking a leadership course changed a student’s leader identity and influenced his or her cognitive structures on a variety of constructs, including leader identity, motivation to lead, leader self-efficacy, leader developmental efficacy, and attitudes and beliefs about leadership.

For the purposes of this research study, there were a number of limitations readers should consider. First, a convenience sample was used at two institutions that had strong leadership programs with numerous opportunities for students to develop; therefore, this study is not generalizable to all leadership courses or leadership development programs. At one institution,

data was collected via an electronic survey, so non-response was a limitation, because some students may have chosen not to respond to the electronic survey.

Significance of the Study

Given the potential that leader identity has to influence the experiences or developmental opportunities a student chooses to pursue, my intent is to provide university personnel with new knowledge and recommendations for students to engage in self-exploration and to broaden their self-concept of being a leader. Specifically, after conducting this study, I hoped to better understand the relationship between leader identity and its underlying cognitive structures such as efficacy and motivation to lead. I also wanted to know the impact taking a leadership course has on a student's leader identity.

Researcher's Perspective

The perspective I brought to this study is based upon 15 years of experience working with college students. Inherent in this viewpoint was my preference for a relational and process-oriented view of leadership versus a positional and hierarchical view of leadership. I am motivated to help each individual student reach his or her fullest potential. I believe people, especially students, will more likely develop leadership skills when given the appropriate opportunities and tools to do so.

As a leadership educator, my role is to prepare young adults to be active and engaged change agents or leaders in their families, communities, and careers. I also see it as part of my responsibility to identify the educational opportunities that result in creating a more significant and robust learning experience for these students. I am constantly intrigued by the ways in which I can enhance leader development opportunities to deepen students' learning and growth. In my experience teaching courses and facilitating workshops, I noticed that as students learn

more about the various leadership theories and approaches, they can often find an approach that resonates with their point of view. Therefore, I engaged in this research with keen curiosity in learning more about the nuanced ways students develop cognitive schemas for being a leader and the experiences and training that support the integration of leadership into one's self-concept.

CHAPTER 2: LITERATURE REVIEW

Throughout this chapter, I review the recent emergence of literature linking identity and leadership (Hogg, 2001; Lord & Hall, 2005; van Knippenberg & Hogg, 2003; van Knippenberg, B., van Knippenberg, D., De Cremer, & Hogg, 2005). To begin, I position the discourse in the arena of leader development while highlighting the important distinctions and contributions of leadership development. Then, I explore leader developmental readiness and the self as a construct; both of these areas set the stage for increasing self-awareness and exploring the antecedents that comprise developing a leader identity. Next, as described by Ibarra, Wittman, Petriglieri, and Day (2014), I explore three main conceptual areas that are informing the discourse around identity and leadership, including: 1) identity theory, 2) social construction, and 3) social identity theory. Then, I describe a leadership identity framework that was created based upon experiences of college-aged students. Lastly, I discuss the literature that describes key constructs that may influence leader identity development in college students such as efficacy, motivation to lead, systemic vs. hierarchical leadership attitudes and beliefs.

Leader and Leadership Development

Leader and leadership development experiences in college provide students with knowledge and skills that support their personal development (Zimmerman-Oster, 1999). Leader development differs from leadership development, in that it focuses on the growth of the individual including his or her personal knowledge, skills, abilities, and occasionally role as a leader (Day, 2001). In contrast, leadership development incorporates the development of the self as a leader with the way an individual interacts with people in a specific context (Day & Halpin, 2004; Guthrie, Bertrand Jones, Osteen, & Hu, 2013). Research suggested that leader development approaches need to engage the individual in development while simultaneously

considering the context, the culture, and the exchange process that occurs between leaders and followers (Avolio, 2007; Kezar & Carducci, 2009; Riggio, 2008). In addition, leader identity is a foundational part of leader development because it shifts or expands the identities that guide a person's growth and development; in particular, it influences the developmental opportunities an individual chooses to pursue (Day et al., 2009). Next, I will provide an overview of leader developmental readiness and its connection to leader identity.

Leader Developmental Readiness (LDR)

In an effort to understand the various factors that influence a leader's ability to learn necessary leadership skills and to perform effectively in leadership situations, Avolio and Hannah (2008) coined a macro-construct called leader developmental readiness (LDR). Leader developmental readiness is defined as "the ability and motivation to attend to, make meaning of, and appropriate new leader KSAA (knowledge, skills, abilities, and attributes) into knowledge structures along with concomitant changes in identity to employ those KSAs" (Avolio & Hannah, 2008, p. 1182). The authors describe LDR based on two higher order constructs: 1) "leaders' motivation to develop" and 2) "leaders' ability to develop" (Avolio & Hannah, 2008, p. 1182). To explore these concepts further, a "leaders' *motivation to develop* is explored through three sub-constructs including: interest and goals, learning goal orientation, and developmental efficacy...while *ability to develop* is promoted through the sub-constructs such as: leaders' self-awareness, self-complexity, and meta-cognitive ability" (Avolio & Hannah, 2008, p. 1182).

Leader Developmental Efficacy as Part of LDR's Motivation to Develop

Within the higher order construct of motivation to develop, developmental self-efficacy is most relevant to my research study. Reichard, Walker, Putter, Middleton, and Johnson (in press) conducted empirical research which found leader developmental efficacy (LDE) was an

important antecedent for leaders' motivation to develop. Researchers conducted three studies with working leaders from various organizational environments which established high external validity. The first study was a quasi-longitudinal study with volunteers (N=73) from for-profit and non-profit organizations participating in an assessment center; the second study included a wide-range non-profit leaders (N=94) completing a cross-sectional survey; and the third study was a quasi-longitudinal design of leaders (N=49) participating in a training program. The results of these empirical efforts showed LDE encourages leaders to engage in leader developmental readiness efforts, and influences their intentions to develop as a leader. When LDE is present, leaders follow through and incorporate leader behaviors into their respective roles. Also, initial results show that leaders who have participated in leader development experiences in the past have a higher level of LDE. There is some evidence that the quality of these experiences may also influence LDE; however, more research is needed to confirm this finding. Lastly, in one training program, leaders who began the program with a lower level of LDE improved more than those who began the program with a higher level of LDE (Reichard et al., in press).

Leader's Ability to Develop

Leader's ability to develop is the second higher order construct of leader developmental readiness (LDR), with three sub-constructs including self-awareness or self-concept clarity (SCC; Campbell et al., 1996), self-complexity (Hannah, Woolfolk, & Lord, 2009), and meta-cognitive ability (Metcalfe & Shimamura, 1994). In regards to my research, it is important to explore and differentiate self-concept clarity from self and identity: "SCC is defined as the extent to which the contents of an individual's self-concept (e.g. perceived personal attributes) are clearly and confidently defined, internally consistent, and temporally stable" (Campbell et al.,

1996, p. 141). Authors differentiate identity and SCC by describing identity as a much broader construct, with more complexity, than SCC.

In an important empirical study, Campbell et al. (1996) conduct three studies with participants attending an undergraduate institution. The sample size for each study was N=471, N=262, and N=328. The results of the study demonstrated that: 1) the SCC scale was reliable and valid, 2) this construct was a stable trait, and 3) SCC was appropriately captured by a self-report survey. In addition, when comparing SCC to the Big 5 Personality Assessment, SCC correlated with Neuroticism, and moderately correlated with Extraversion, Agreeableness, and Conscientiousness. Lastly, SCC correlated with self-esteem, which is a separate and stand-alone construct.

At this time, there is not a measure for LDR at the macro-level; however, authors suggest that research efforts are needed to explore each of these subareas in order to better understand the ways in which these constructs interact and support leader development (Hannah & Avolio, 2010). Hannah and Avolio (2010) highlight that “leader’s self-concepts are elaborate and multi-dimensional structures” (p. 287). In support of this argument, research on self, self-awareness, and identity is of utmost importance and may explain key elements of leader developmental readiness.

Self and Self-Awareness

Much of the identity development literature incorporated cognitive development and development of meta-competencies, such as self-awareness, that are necessary for identity development to occur (Hall, 2004). Self is a knowledge structure that helps people organize and give meaning to memory and behavior (van Knippenberg, B. et al., 2005). According to Leary and Tangney (2012), the self is a “mental” or psychological capacity that allows a person to

consciously experience, to be self-reflective, and to regulate one's own behavior. An individual can have multiple conceptions of one's self; some may vary in strength and salience depending on the person's attitudes, values, and knowledge. These views were also not one-dimensional; a person's self-view often bases itself on his or her perception of the way others perceive and interact with himself or herself (Oyserman, Elmore, & Smith, 2012). These interactions change based upon the situation or context, and they often depend upon the individual's role (e.g. personal vs. professional). Additionally, people in the work context shift their identity or make these transitions by exploring provisional selves in order to experiment with new identity processes for one's professional identity (Ibarra et al., 2010; Ibarra, 1999).

According to Hall (2004), self-awareness is "the extent to which people are conscious of various aspects of their identities and the extent to which their self-perceptions are internally integrated and congruent with the way others perceive them" (p. 154). Individuals know who they are, how they act, and the way in which others perceive them. A person who is self-aware possesses the ability to acknowledge two key components: 1) understanding one's inner state, and 2) knowing the impression he or she gives others (Hall, 2004). Self-awareness is an essential component of developing a leader identity (Hall, 2004).

Ibarra et al. (2010) support the need for additional research on self-awareness by stating "the development of leadership skills is inextricably integrated with the development of the person's self-concept as a leader" (p. 3). This argument reinforces the importance of situating this exploration in the learning processes associated with leader development and the ways in which one develops a sense of self (i.e. self-concept as a leader). While the intersection between leader development and identity development is an emerging area of focus, the next section seeks to explain what is currently known from research.

Identity and Leadership Theories, Models and Frameworks

Numerous models and suggested frameworks exist to structure the discourse around identity and leadership development (Day & Harrison, 2007; Day et al., 2009; De Rue & Ashford, 2010; Hogg, van Knippenberg, & Rast, 2012; Ibarra et al., 2010; Lord & Hall, 2005). The following section provides an overview of the current theories and the degree of empirical research that exists supporting these assertions. The information is organized by the following themes: 1) identity theory 2) social construction, 3) social identity theory of leadership, and 4) college student leader identity development. These highlight the distinctiveness of leader identity development theories and describe the process in which a person perceives himself or herself as a leader (Day et al., 2009).

Identity Theory

Identity theory is the first of three over-arching frameworks that explain the relationship between identity and leadership (Ibarra et al., 2014). Included in identity theory are two primary methods: 1) the exploration and adoption of social roles, and 2) the practicing of the leader role (Day & Harrison, 2007; Day et al., 2009; Lord & Hall, 2005). A number of authors have theories that fall under this category including: 1) identity-based leader development model (Ibarra et al., 2010), 2) the integrated lifespan theory of leader development, (Day et al., 2009), and 3) leadership development and theory of learning and expertise (Lord & Hall, 2005).

Identity-based leader development model. Ibarra et al. (2010) coined a new term called identity-based leader development. This model operated off of two basic assumptions: 1) leadership is a process or a type of interaction rather than a formal position, and 2) self-understanding and experience are equally important. These authors described the leader identity development process as a transition model where individuals disengage with fixed identities to

explore an alternative identity. These old and new identities co-exist while the person determines what will be more effective and authentic in one's experience or practice (Ibarra, 1999, 2003; Ibarra et al., 2010). In work settings, people experiment with provisional selves by assuming new identities in public settings as a way of adopting a leader identity (Ibarra, 1999). In summary, this theoretical framework suggests viewing the leader identity process as an identity transition process when designing training and experiences for leaders (Ibarra et al., 2010).

Integrated lifespan theory of leader development. Day et al. (2009) proposed a leadership theory called the "integrative lifespan theory of leader development" (p.172). This theory incorporated adult development, identity development, and self-regulation as the essential underlying processes that influence a person's success as a leader (Day et al., 2009). In this theory, the intention was to move from competency development to the development of the whole person as a leader. The theory described that if a person intentionally developed aspects of one's self and one's identity, and also practiced self-regulation, then the result would be more observable, external behaviors of leader competencies and expertise (Day et al., 2009). In this theory, authors discussed the importance of focusing on the development of underlying psychological qualities such as self-regulation and identity development. This approach encouraged leader development across the lifespan of the individual and acknowledged that self-growth and personal development will lead to more effective and competent leaders (Day et al, 2009).

Day and Sin (2011) conducted a longitudinal research study on leaders' developmental trajectories by engaging student participants in team-based action learning projects at a University in the Pacific Rim region. There was a robust sample (N=1315 students at the

beginning of the project and N=985 students at the completion of the project). The study considered developmental trajectories of student leaders and found that students started at different points and develop at different rates throughout the project. In addition, team peer advisors rated students who self-identified as a leader with a higher level of leadership effectiveness. Findings in this study suggested that leader identity, goal-orientation, and goal selection are promising areas for future development. Additionally, researchers highlighted that more research needs to be done to determine the appropriate length of the leader development programs (e.g. the length being a few hours, a day, multiple days, or a week; Day & Sin, 2011).

Leadership development and theory of learning and expertise. Lord and Hall (2005) referred to the underpinnings of cognitive psychology and a general theory of learning and expertise in order to create a leader development model that includes deep information processing and contains changes that occur in underlying knowledge structures during skill development over time. A leader's self-identity was emphasized as a central focus of this theory. In addition, this model considered the way that knowledge is organized in the mind, the meta-cognitive processes associated with the person engaging in leader development situations, and a person's reflection on those experiences, which all build an understanding of various situations as well as the interpersonal interactions (Lord & Hall, 2005). In this model, leader identity development moves through three skill levels – from novice, to intermediate, to expert – while keeping in mind the individual's experience gained from participating in various personal and professional domains. As part of this model, authors acknowledged the importance of leaders proactively engaging in their leader development, and suggested that identity, meta-cognitive processes, and emotional regulation are essential elements to the mental schemas one develops with leadership experiences (Lord & Hall, 2005).

Social Construction—Leader Identity Construction Process

The next theoretical grouping is social construction (Ibarra et al., 2014), highlighting one theory – De Rue and Ashford’s (2010) leader identity construction process. In this process, individuals go through a cognitive process where they claim and grant leader and follower identities as method of social construction (De Rue & Ashford, 2010). This identity process is then mutually reinforced and reciprocated by another person (at the dyadic level) or others in the group (at the organizational/system level). This theory expounded that leader identities are not only cognitions within a person’s self-concept, they are also socially constructed and innately related and/or reciprocal. Therefore, if a person claims a leader identity, then a follower must also grant this person a leader identity. At the organizational level, the identity is endorsed and reinforced within the broader organizational context. Identity is dynamic and changes over time, throughout various situations and contexts. At present, this model contributes theoretical, not empirical, knowledge to the literature linking identity and leadership.

Social Identity Theory of Leadership

Social Identity Theory is the final theoretical grouping suggested by Ibarra et al. (2014) that attempts to describe existing theories connecting leadership and identity. Rooted in the tenets of self-categorization theory (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987) and the social identity theory of influence (Hogg & Turner, 1987), the social identity theory of leadership positions leadership as a “group-membership-based influence process” and, as a result, provides opportunity to more strongly integrate key components – such as self, identity, social influence, and group process – into our understanding of leadership (Hogg et al., 2012, p. 261). Hogg et al. (2012) describe the social identity theory of leaders as a process where “group membership becomes increasingly salient and important to members of the group and members identify more

strongly with the group, [and] effective leadership rests increasingly on the leader being considered by followers to possess prototypical properties of the group” (p. 264).

Hogg (2001) first published the description of social identity theory of leadership highlighting leadership as process of social categorization. Shortly thereafter, additional theoretical explorations expanded this identity-based concept to an organizational context (van Knippenberg & Hogg, 2003; Van Knippenberg & Hogg, 2003a) as well as suggested that research be conducted on a “follower’s self-concept both as mediator and moderator in the relationship between leadership and follower behavior” (van Knippenberg, D. et al., 2004, p.826).

One of the key constructs highlighted in social identity theory of leadership is the importance of a prototypical leader (Hogg et al., 2012). As groups evolve, members of the group select the leader who embodies the most typical characteristics of the group. Research states that a prototypical leader is more effective in groups than a non-prototypical leader (Hogg et al., 2012). In addition, "prototypical members are disproportionately influential over the life of a group...people look to their leaders to define their identity" (Hogg et al., 2012, p. 264). The majority of the empirical research (Fielding & Hogg, 1997; Hains, Hogg, & Duck, 1997; van Knippenberg, B. & van Knippenberg, D., 2005) that exists discusses a leader identity from the followers’ perspective of the group’s prototypical leader and not as a result of a person self-identifying as a leader.

Empirical research to support findings of the social identity theory of leadership.

Following is a summary of the research on social identity theory, specifically highlighting empirical contributions to identity. Hains et al., (1997) conducted an experiment where 184 introductory psychology students were manipulated based on three variables including group

saliency, leader prototypically, and leader characteristics. Findings from this study showed that when group membership saliency was high, the leader was more prototypical of the group and was seen as more effective. However, when group membership saliency was low, participants did not prefer a prototypical leader over a non-prototypical leader. Hogg, Hains, and Mason, (1998) confirmed this information and found that followers had positive perceptions of a prototypical leader when followers identified as part of the in-group. It was also re-enforced in a field experiment on an outward trip (i.e. off-campus, wilderness retreat) where, as time passed on the trip, the followers more closely identified with the group, and the leader was perceived as more effective (Fielding & Hogg, 1997). As a result, these studies implied that when the leader is a prototypical member of the group, followers have higher perceptions of that person's effectiveness.

Additionally, van Knippenberg B. and van Knippenberg D. (2005) explored the role of leader self-sacrifice and leadership effectiveness when moderated by leader prototypically. A total of four studies were conducted with Dutch university students, including a laboratory experiment (N=174), two scenario experiments as part of a classroom demonstration (N=497 and N=193), and a cross-sectional survey of primary school employees (N= 161). The results of these six studies are robust, given the variety of samples, as well as the diversity of the study-type and multiple ways leadership effectiveness was defined. These researchers found that "...prototypical leaders were perceived to be more effective, more charismatic, and more group-oriented than less prototypical leaders" (van Knippenberg, B. & van Knippenberg, D., 2005, p. 35). Additionally, self-sacrificing behaviors were more beneficial for the non-prototypical leader than for the prototypical leader (van Knippenberg, B. & van Knippenberg, D., 2005).

To further expand the social identity approach to leadership, Steffens, Haslam, and Reicher (2014) describe the multiple dimensions of identity leadership and then validate an assessment called the identity leadership inventory (ILI). The dimensions included are: “identity prototypicality, ‘being one of us’; identity advancement, ‘doing it for us’; identity entrepreneurship, ‘crafting a sense of us’; and identity impresarioship, ‘making us matter’” (Steffens et al., 2014). Samples included people working in professional organizations or sports teams from the US, China, and Belgium (N=1730). The authors conducted four studies to validate the measure and establish construct, criterion, and discriminant validity. Findings demonstrated the constructs predict a variety of outcomes including: 1) leader influence, 2) team confidence, 3) identification with team, and 4) task cohesion. As a result of this study, Steffens et al. (2014) suggested that research should move beyond the prototypicality of the leader and begin to address other additional and equally important components of identity and leadership which are included in ILI.

Leader self-definition—leader identity defined by the leader. Rus, van Knippenberg, and Wisse (2010) made an important shift in research at this time by beginning to focus on identity of the leader when it is self-defined. Prior to this study, the research discussed the prototypical leader as defined by followers. This study is the first to explore the implications of “leader self-definition on leader actions” (Rus et al., 2010, p. 524). These authors shift the conversation from followers’ self-concept to leaders’ self-concept and the ways in which this impacts leader behavior. This study is particularly relevant because I used the leader self-definition scale in my study.

Rus et al., (2010) conducted six studies, including two laboratory experiments, two scenario experiments, and two cross-sectional surveys to determine if one’s self-definition as a

leader influenced one's self-serving behaviors. Four of the six experiments included Dutch students in business administration (N=80), economics (N=74), as well as two random samples of the student population at large (N=69 and N=107). The sample for the remaining two studies used an existing British organization and polled individuals in management positions (N=140). As a result, each of these studies confirmed that "self-definition as a leader influences the extent to which [followers] rely on information from their peers when making a decision" (p. 518). Additionally, results found that individuals who identified as leader acted in more self-serving ways when those around them performed better. In similar situations where peer performance was positive, individuals with a low self-definition as a leader were less self-serving. In these examples, leader self-definition moderated the relationship between leader self-serving behaviors and the allocation of resources within the organization (Rus et al., 2010).

College Student Leader Identity Development Model

Komives et al. (2005) conducted a qualitative, grounded theory study to explore the process that a college student experiences in developing a leadership identity; this model is called the Leader Identity Development (LID) model. The leader identity development model introduced a specific cognitive shift that occurs during college: students arrive with a hierarchical model of leadership and, during college, move to a more post-industrial view of leadership (Komives et al., 2005; Rost, 1993). The LID model uses the relational model of leadership as its foundational theory (Komives, Lucas, & McMahon, 2009).

This research brought to the forefront the college experience and the development that occurs specifically in the college context. The results described the six stages that students navigate through during the process: 1) awareness and recognition that leaders exist, 2) exploration and engagement by the student, 3) leader identified which states a recognition by the

student that organizations have both leaders and followers, 4) leadership differentiated where the student recognized that various types of leadership occur beyond the role of a positional leader, and that anyone can engage in the work, 5) generativity, where the student is committed to sustaining the larger purposes of the model, and 6) integration/synthesis, continual, active engagement in the leadership process. In other words, students' mental models for learning about leadership as a process change when they transition to and from new leader roles, as well as when they engage in new student groups. Limitations of this research included a limited experimenter demographic and sample size, as the research team was comprised of all white women and only thirteen students participated in the study.

According to Komives et al., (2009) the development of a quantitative measure is in progress. Using the 2006 Multi-Institutional Study of Leadership, researchers conducted a pilot study to develop a scale for stages three and four of the LID model (Dugan & Komives, 2006, 2007). The results of this exploratory study demonstrated that students who used stage four thinking (i.e. interdependent perspectives and non-positional views of leadership) were ranked 10-25% higher on the leadership outcomes associated with the social change model of leadership development.

Empirical research for college student identity development. Since the development of the leader identity development model in 2005 and the pilot testing of this quantitative measure in 2006, there have been very few empirical studies conducted to explore leader identity development with college students. In 2013, Pyle studied leader identity development and leadership capacity in college students. Based upon self-reported data, Pyle (2013) found that declaring a leader identity contributed to a student's growth during a leadership program. The lack of research on leader identity development justifies the relevance of the Pyle study.

Harms, Roberts, and Wood (2007) conducted a quantitative study investigating the role of individual differences in status attainment within hierarchical, social organizations: fraternities and sororities. The participants were comprised of 336 college students (n= 203 women and N=133 men) from four fraternities and three sororities; the majority of the individuals identified as Caucasian. Participants completed a survey including the following scales: Big Five personality traits, trait dominance, power motive, leadership identity sub-scale (Chan & Drasgow, 2001), social influence, subjective influence, and organizational offices. A limitation of the study was that the results were based upon students living together in social organizations where positional leadership is present; the results may not be transferrable to other settings (i.e. workplace, student organizations, etc.). However, the results showed that students who have a positive self-concept are more likely to feel they have power or control over personal life events (Harms et al., 2007). In addition, a key finding was that leadership identity mediated between personality and status attainment (i.e. social influence and subjective influence), but not for the attainment of an executive office.

Analysis and Summary of Identity and Leadership Theories

Each of these theoretical frameworks described the way in which one's self-definition influences the leader development activities and learning experiences a student engages in both inside and outside of the classroom (Day et al., 2009; Komives et al., 2005; Lord & Hall, 2005). In particular, Day et al., (2009) discussed the ways that these leader development experiences can carry implications for students over their lifetime. Lord and Hall (2005) considered the underlying processes required to develop a leader identity, as these beliefs shape the self-development opportunities available to individuals. Lastly, Komives et al., (2005) explored leader identity as it relates to college students, and described the way that identity shapes a

student's definition of his or her self. Similarly, these theoretical frameworks and empirical studies support the idea that leader identity is essential to leader development. More research is needed to understand the perspective of the self in the leader self-identification process, as well as the necessary antecedents associated with developing one's self-concept as a leader.

Efficacy is an Important Construct in Leader Development

When applying a holistic approach to leader development, the focus needs to include an individual's identity development as well as aspects of self-regulation such as self-efficacy and self-awareness (Day et al., 2009). At the college student level, self-efficacy can influence a student's choice to engage in and participate as a leader in various activities (Dugan, Garland, Jacoby, & Gasiorski, 2008; Wagner, 2011). Additional research, which is described below, from Rosch, Collier, and Thompson (2015), identified leadership efficacy as the strongest predictor of a leadership behavior. As a result, researchers found that developing a college student's leadership efficacy was an important component of leader development.

Rooted in social cognitive theory, self-efficacy is defined as "beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" (Bandura, 1997, p. 3). Hannah, Avolio, Luthans, and Harms (2008) further described leader efficacy as essential to a leader's ability to understand his or her positive psychological capabilities and to sustain involvement across emerging challenges and contexts. Other researchers described leader self-efficacy as the confidence a person has to be successful in or to fulfill a specific leadership role (McCormick & Tanguma, 2007; Murphy & Ensher, 1999).

Empirical Evidence for Leadership Efficacy

Murphy and Ensher (1999) conducted a quantitative, longitudinal study with 56 subordinate-supervisor dyads working in a media company. The dyads were comprised of

students working an eight-week internship and their supervisors, who were employed by the media company. The constructs considered in the media company included work expectations for interns, supervisor self-efficacy and optimism, LMX rating, perceived similarity and perceived liking between dyads, and intern's job satisfaction scores. Results of the study found that subordinates who have a high work self-efficacy were: 1) liked by their supervisors, 2) seen to be similar to their supervisors, 3) rated positively on the LMX scale, and 4) rated as better performers than peers with a low work self-efficacy. Subordinates, who were initially rated low in work self-efficacy and high in LMX quality, experienced an increase in self-efficacy levels throughout the program. Other findings showed when leaders' self-ratings of efficacy and optimism are high, their ratings of subordinates are higher as well.

In this study, Chemers, Watson, and May (2000) conducted a two-part longitudinal study at multiple universities in California and Arizona to explore leadership efficacy, optimism, and leadership performance. In the first part, military science instructors assessed the cadets (N=96) on their military leadership potential. In the second of the study, cadets (N=64) attended a six-week leadership training camp and were evaluated by tactical officers, peers who lived with the cadets, and trained assessors who facilitated the leadership sessions. Cadets completed self-assessments based on four constructs, including self-esteem, optimism, self-perception of leadership skill, and leadership efficacy. The results of the study showed that high levels of efficacy and optimism contribute positively to the leader's self-perception of high performance in a leadership role. Additionally, this high performance was visible by others; cadets with high self-efficacy and optimism scores were ranked by peers and supervisors to perform better than other cadets who were less confident (Chemers et al., 2000).

Hoyt, Murphy, Halverson, and Watson (2003) conducted two laboratory studies with students from a small west coast liberal arts school to evaluate leadership effectiveness by examining efficacy, anxiety, and collective efficacy. Students, who were placed in groups of three, with one person designated as the leader, were asked to perform specific hiring tasks. Researchers adjusted situational pressures or stress levels experienced by the student groups to a moderate or high level. The first study sample consisted of 39 groups of three (N=117) and the second study, included a sample of 72 groups of three (N=216). Results demonstrated that a chain of events lead to collective efficacy, in this study, "leadership efficacy predicted anxiety, task self-efficacy, and leader collective efficacy" (Hoyt et al. 2003, p. 269). Leaders who believed they could complete the task at hand transferred this belief to their followers. Surprisingly, in this study, leadership efficacy did not predict performance; this is the opposite of previous research stating that efficacy is connected to leadership outcomes (Chemers, et al., 2000). Hoyt et al. (2003) suggest that the reason for this finding might be that efficacy beliefs are transferred over time, and the length of their study was shorter than the longitudinal design of Chemer's et al. (2000) study.

McCormick, Tanguma, and Lopez-Forment (2002), conducted a quantitative study of 223 participants from a southwest university asking individuals to complete a questionnaire. The purpose of this study was to support the idea that leadership self-efficacy is an important component of leadership performance. The results of this study demonstrated that individuals with a high level of leadership-efficacy are more likely to participate in leadership roles and are more often likely to take charge in leadership situations than those with a low leadership self-efficacy. In addition, those with more leadership experience self-report higher levels of self-efficacy. Women also demonstrated lower levels of leadership efficacy than men.

Dugan and Komives (2010) conducted a multi-institutional study, including 14,252 college seniors across 50 institutions who took a survey assessment exploring the following concepts: precollege characteristics, college experiences, socially responsible leadership, and self-efficacy. Results related to self-efficacy found there to be an important connection and positive relationship between a student's leadership efficacy and his or her leadership capacity. When efficacy was used as an intermediate variable it explained the variance across several social change outcome measures. However, when authors included efficacy in regression models, there was a negative relationship between efficacy and each of these outcomes: congruence, commitment, collaboration, common purpose, controversy with civility, and change (Dugan & Komives, 2010). Dugan and Komives (2010) suggest the following rationale for this finding: 1) by repeatedly surveying students, they start to consider their initial efficacy levels as incorrect, and may describe them as changing overtime, causing a measurement issue, and 2) students enter college with their self-perceptions of efficacy to be higher than they really are. Consequently, these results highlight the importance of assisting students with both efficacy and capacity building techniques (Dugan & Komives, 2010).

Dugan et al. (2008) explored leadership self-efficacy among commuter students using data from the 2006 Multi-Institutional Study of Leadership. In this study, a total of 11,864 students were considered from 50 four-year institutions; participants who lived at home were described as dependent commuters (N=5,982), and participants who lived off-campus with friends or on their own were considered independent commuters (N=16,376). The study found that there were significant differences between dependent commuters and independent commuters: independent commuters had higher levels of self-efficacy than their peers who lived at home with a parent or guardian (e.g. dependent commuters). Sociocultural conversations with peers, leadership roles,

and mentoring relationships with employers were also predictors of higher levels of leadership efficacy in commuter students (Dugan et. al., 2008).

Summary and Next Steps Regarding Leadership Efficacy

According to Hannah et al. (2008), efficacy was an extremely valid construct – yet more examination is needed to understand its effects in leadership research. Some research described leader and leadership efficacy as being impacted by a broad range of factors, including the individual’s identity and self-awareness, numerous group and structural contexts, and a variety of levels within organizations (Hall, 2004; Hannah et al., 2008). In contrast, other research demonstrated that there may be reason to consider leader efficacy as its own construct, suggesting efficacy is more complex than previously understood (Anderson, Krajewski, Goffin, & Jackson, 2008; Machida & Schaubroeck, 2011).

Machida and Schaubroeck (2011) proposed an alternative view to the role of self-efficacy in leader development and “formulate the role of leader self-efficacy in the context of individual leader development” (p. 460). Authors discussed the four areas of efficacy that act together to shape efficacy development of a leader: 1) preparatory self-efficacy, 2) efficacy spirals, 3) learning self-efficacy, and 4) resiliency efficacy (Machida & Schaubroeck, 2011). This differed from Day et al.’s (2009) integrated theory of leader development where efficacy development is a subcomponent of self-regulation in leader development versus being its own construct. These differing viewpoints support the need for additional research on leader efficacy and its relationship to leader development, student involvement, and college student development.

Motivation to Lead

Self-motivation was another important area to consider when connecting self and identity as part of leader development. Hannah et al., (2008) proposed a “leader’s level of efficacy for

self-motivation will be related to the level of effort they allocate to both thinking through and performing in challenging circumstances” (p. 677). Related to this area of research, Chan and Drasgow (2001) explored a theoretical framework for understanding the role of individual differences and leadership through the creation of a motivation to lead (MTL) theory. “A key assumption of the theory is that non-cognitive ability constructs such as personality and values relate to leader behaviors through the individual’s MTL, which in turn affects the individual’s participation in leadership roles and activities” (p. 481).

Chan and Drasgow (2001) further described motivation to lead as “a multivariate approach to integrate the process of leader development with that of leadership performance” (p.496). Based upon two empirical theories of behavior – Fishbein and Ajzen’s (1975) theory of reasoned action and Triandis’ (1980) theory of interpersonal behavior – Chan and Drasgow (2001) developed a theory of leader development. Towards developing a theory of leader behavior, Chan and Drasgow (2001) conducted a three-month longitudinal study in order to create the MTL measure, as well as to establish the validity of the model. The sample consisted of Singapore military recruits (N=1,594), Singapore junior college students (N=274), and US undergraduates taking an introductory psychology course (N=293). Initially, researchers created, tested, and validated the measure using focus group and survey methods. Findings from this study created three sub-models or factors that impact leader motivation, including affective MTL (i.e., students who like to lead), social normative MTL (i.e., student’s sense of duty or responsibility to lead), and non-calculative MTL (i.e., cost of leading matches the benefit received; Chan & Drasgow, 2001). In addition, the model suggested values, personality, prior experience, and self-efficacy underscore a person’s desire to lead.

The MTL model is important because it creates a desire for individuals to lead and participate in leadership processes, in contrast to other leadership theories that look at the end results or the outcomes of effective leadership (Chan & Drasgow, 2001). It is assumed that a person's personality and values impact his or her motivation to lead, which in turn impacts his or her involvement in leadership activities (Chan & Drasgow, 2001). Supported by prior research, this model assumed that individuals gain social skills and knowledge through involvement in leadership activities (Chan & Drasgow, 2001; Lord & Hall 1992, Zaccaro, Gilbert, Thor, & Mumford 1991). Additionally, the model assumed that individuals can develop leadership skills, and the personal characteristics they display are a result of differences in leadership efficacy and leadership experiences. It also presumed that leadership effectiveness is impacted through job satisfaction and morale – the more one enjoys his or her work, the more effective one will be in accomplishing the tasks.

When considering its theoretical contributions, this research “has demonstrated that personality, values, and past leadership experience are related to MTL both directly and indirectly through leadership self-efficacy, and that MTL is related to behavioral criteria that are indicative of the participation in leadership training and activities” (Chan & Drasgow, 2001, p.495). Through the empirical findings explored in Chan and Drasgow's study, the researchers are closer to identifying an individual theory of leader behavior. A practical finding is the “MTL considers personality, sociocultural values, leadership self-efficacy, past leadership experience are antecedents to the MTL, whereas general cognitive ability is unrelated to MTL” (Chan & Drasgow, 2001, p. 494). It is important to emphasize to organizations and institutions of higher learning that MTL is changeable over the lifespan of a leader (Chan & Drasgow, 2001).

The MTL scale was also used in a study by Rosch et al. (2015) who studied results from 1,338 undergraduate students at a large public research institution located in the Midwest. Students were surveyed as part of the 2012 Multi-Institutional Study of Leadership on a variety of measures, including leadership capacity and leadership efficacy. Additionally, students at this institution were also surveyed on the motivation to lead scale: specifically, the affective identity (i.e. desire to lead) subscale and the social normative (i.e. responsibility to lead) subscale. Results of this study compare findings from these two subscales with leadership efficacy and leadership outcomes. Findings suggest that leadership efficacy predicts that students will be engaged in leadership behaviors (Rosch et al., 2015). Additionally, students who self-identify as a leader and/or have a desire to lead (e.g. affective identity), and students who felt a responsibility to lead (e.g. social normative), were more likely to participate in a leadership position. Additionally, results suggested that students who felt a responsibility to lead (e.g. social normative) were less likely to occupy a position than those with high affective identity scores. Similar to prior studies on leadership efficacy (Dugan et al., 2008; McCormick et al., 2002), leadership self-efficacy was the highest predicted leadership behavior in this study. Demographic findings showed no difference between men and women in this study. However, Asian American students may hold different types and levels of motivation to participate in leadership roles than Latino, African American students, and Caucasian students. Additional research is needed to further explore the differences in race.

Leadership Attitudes and Beliefs (Systemic vs. Hierarchical)

As a way of exploring the systemic versus hierarchical attitudes and beliefs of college students, Wielkiewicz (2000) created an instrument that explores two common viewpoints about leadership and organizations. The first viewpoint was hierarchical thinking, where the leader is

seen as more responsible than others in the organization. From this viewpoint, a person is a leader because of his or her position, and this position grants the leader autonomy and authority. The second view of leadership was non-hierarchical and systemic; it views leadership as a relational process based upon complex and adaptive systems (Heifetz, 1994; Allen, Stelzner, & Wielkiewicz, 1998). Therefore, the distinction between systemic versus hierarchical beliefs is worth exploring to determine if a student's view of leadership changes as a result of taking an introductory leadership course.

Wielkiewicz (2000) conducted a study with 675 students from two private, Catholic liberal arts colleges and one state institution university in the Midwest. The primary purpose of this study was to develop a measure to explore college students' attitudes and beliefs about leadership processes and how they expect leaders to act. Eight different conceptual scales - authority, ethics, learning, relationship, change, leader dependence, systemic thinking, and cooperation - were included in the model, which required 86 items to be assessed in the study. The results produced two unrelated dimensions, including hierarchical thinking and systemic thinking, resulting in a total of 28 items being included in the scale (14 items in hierarchical thinking and 14 items in systemic thinking; Wielkiewicz, 2000).

CHAPTER 3: STUDY DESIGN AND METHODOLOGY

Purpose of the Study

The purpose of this study was to explore the extent to which the constructs (motivation, leadership self-efficacy, developmental self-efficacy, and systemic vs. hierarchical attitudes and beliefs predicted a change in leader identity for college students registered in an introductory leadership theory course. As such, the following research questions guided this study:

Research Questions:

1. Were there differences in students' pre-test and post-test scores at the beginning and the end of a leadership class when comparing the constructs (motivation to lead, leadership self-efficacy, developmental self-efficacy, systemic vs. hierarchical attitudes and beliefs about leadership) in regard to a students' leader identity?
2. Was there a statistically significant difference between males and females on their pre-test and post-test identity score?
3. To what extent did the constructs (motivation to lead, leadership self-efficacy, developmental self-efficacy, systemic vs. hierarchical attitudes and beliefs about leadership) predict leader identity?
4. Were there differences among the three course-sections of leadership classes and the gain/loss score on a students' leader identity?
5. Was there a difference in students' leader identity scores between the students who participated in the introductory leadership theory course and those who participated in the organizational psychology class?

Research Design and Rationale

Rooted in the post-positivist paradigm, this study was a quantitative study that sought to understand the theories proposed by the aforementioned conceptual framework and the constructs that influence identity development in college students (Creswell, 2012). Philips and Burbules (2000), described research as inherently-value laden. In addition, scientific research from the post-positivist view sought to establish procedures and criteria that would help to rule out subjective experiences or opinions (Philips & Burbules, 2000). Therefore, by embedding the study in this theoretical framework, their goals were aligned: exploring how a student develops a leader identity, as well as describing if there are relationships between the various constructs. Two quantitative approaches were used to answer the research questions in this study, including a weak quasi-experimental design with an intervention and comparison group, as well as a complex associational design (Creswell, 2012).

The first research question was: Were there differences in students' pre-test and post-test scores at the beginning and the end of a leadership class when comparing the constructs (motivation to lead, leadership self-efficacy, developmental self-efficacy, systemic vs. hierarchical attitudes and beliefs about leadership) in regard to a students' leader identity? For this question the research design was a weak quasi-experimental, nonequivalent design, including a pretest and posttest with an intervention and comparison group. According to Gliner, Morgan, and Leech (2009), the procedure for this research design was diagrammed in Figure 1:

Institution	Random assignment	Experimental or Comparison	Pretest	Intervention	Posttest
Institution A	NR	E	O ₁	X	O ₂
Institution B	NR	E	O ₁	X	O ₂
Institution B	NR	C	O ₁	~X	O ₂

Figure 1. Diagram of weak, nonequivalent research design for pre-test and post-test.

A leadership course was used as the intervention in this research question. This design explored if there was a difference between a student's pre-test score and post-test score, as well as the extent to which there was or was not a change from the beginning to the end of the course. To analyze this information, a paired samples t-test was performed.

The second research question was: Was there a statistically significant difference between males and females on their pre-test and post-test identity score? A basic difference approach was the rationale used for this quasi-experimental question. A mixed ANOVA was conducted to assess whether there were differences between genders and if there was a change in leader identity ratings over the course of the semester.

The third research question was: To what extent did the constructs (motivation to lead, leadership self-efficacy, developmental self-efficacy, systemic vs. hierarchical attitudes and beliefs about leadership) predict leader identity? The rationale for using the associational approach in this design was to determine the extent to which the various constructs that were measured predicted a change in a college student's leader identity (Gliner et al., 2009). To analyze this information, a multiple regression was conducted.

In order to control for teacher bias, a fourth research question was asked: Were there differences among the three course-sections of leadership classes and the gain/loss score on a student's leader identity? Two institutions offered a total of three sections of an introductory leadership theory course; the two institutions investigated were titled 1) Institution A and 2) Institution B. The goal in conducting this analysis was to control for bias and dismiss extraneous variables such as characteristics of the teacher. Given the experience and investment level of the instructors, I did not anticipate a difference in the three sections. To analyze this information, an ANOVA was conducted which provided comparisons to confirm this assumption.

Lastly, the fifth research question was: Was there a difference in students' leader identity scores between the students who participated in the introductory leadership theory course and those who participated in the organizational psychology class? In this question, a comparison group of similar participants who took an organizational psychology course at Institution B were given a pre-test and post-test. The goal in conducting this analysis was to ensure that if the participants demonstrated a change in their pre-test and post-test scores, it was a result of the intervention, and not due to other participant characteristics. The comparison group reduced bias by demonstrating that the groups participating in the study possessed similar characteristics.

Participants and Site

The population for this study was undergraduate students enrolled in a leadership course at a large Midwestern public university, as well as a small west coast liberal arts college. The campuses chosen for this study have extensive leadership programs, experienced instructors, and similar course formats (i.e. text books, course structures, and syllabi). Students who attended these institutions and participated in these programs consisted of a diverse population that represented a variety of demographic variables, including race, gender, year in college, and international or domestic origin.

Two institutions were used for this study. Institution A was a large Midwestern public university with approximately 32,000 undergraduates and 12,000 graduate students. The university is a land-grant institution with an intentional focus on developing student leaders. Campus offerings include a leadership minor, numerous leadership courses, a leadership certificate program and co-curricular leadership retreats that focus on developing leadership skills. There were approximately 1,200 students who participated and were deemed to have a

significant leadership experience at this institution. These offerings were coordinated through a leadership center.

Institution B was a small private liberal arts college focusing on undergraduate education with approximately 1,200 undergraduate students in attendance. The college's mission highlights the importance of developing responsible student leaders. Institution B offers a leadership minor, numerous courses, internship opportunities, research opportunities, and a co-curricular leadership program which also focuses on the development of leadership competencies. These offerings are also coordinated through a leadership institute.

The introductory leadership course had a very similar format at both institutions. The primary text used in the course was called *Leadership: Theory and Practice* by Peter Northouse. A secondary text for Institution B was *Strengths Based Leadership* by Tom Rath and Barry Conchie. Both institutions included discussions about the impacts of gender and culture on leadership. Course offerings were structured similarly in that they used a variety of experiential learning activities to encourage knowledge transfer. Exams and papers were also used as ways to integrate and evaluate learning.

The comparison group for this study was comprised of similar student participants attending Institution B who took an organizational psychology class. These students consisted of a diverse population representing a variety of demographic variables, as aforementioned. In addition, the course design included two weeks of content focusing on leadership. This was important to this study because the intent was to provide a strong comparison group and an opportunity to determine the extent to which changes are due to students' participation in a leadership theory course. Institution B had a psychology research participation requirement where students who were enrolled for entry level psychology classes were required to complete

up to five hours of research credits. Alternatively, students could choose to summarize the methodology and findings of a published research article as a replacement for the research participation requirement.

Upon receiving approval from the institutional review board at Colorado State University, as well as both research sites, data was collected. The design for this study was a convenience sample using a sequential operations approach (Gliner et al., 2009). Students self-selected into the course at the respective campuses. They were able to choose to take the course either as an elective course or as a requirement for a leadership minor. Students attending Institution A and Institution B took a pre-test before taking the leadership theory course or the course being used as the comparison. Then, both groups took their respective courses. At the end of the 16 week semester, both groups took the post-test. Data was collected at Institution A via an anonymous, paper-based survey (see *Appendix A*). Students had the option not to participate. For Institution B, an email was sent to the individuals in the courses via their instructor explaining the purpose of the study and inviting them to participate (see *Appendix B*). Students had the option not to participate. In addition, at Institution B, the researcher was the instructor for one of the courses; therefore, she sent a separate email to her course participants informing them that their participation would not influence their performance in the course (see *Appendix C*). In addition, at Institution B, the comparison group was given a handout by the instructor, providing guidance on how to participate in the study (see *Appendix D*). Lastly, an example of the survey instrument distributed to both institutions for the pre-test and post-test can be found in *Appendix E*.

Measures

Variables

The variables that were included in this study include leader self-definition (leader identity), motivation to lead, efficacy, systemic vs. hierarchical attitudes and beliefs, and gender.

A summary of the constructs are included below:

Table 1

Summary of Constructs

Constructs		
Name	Type	Levels
Leader Self-Definition Scale (Leader identity)	Scale	5
Gain or Loss on Leader Self-Definition Scale (Leader identity)	Scale	5
Motivation to Lead Scale	Scale	5
Leadership Self-Efficacy Scale	Scale	5
Developmental Self-Efficacy Scale	Scale	5
Leadership Attitudes and Beliefs Scale (referred to as systemic vs. hierarchical attitudes and beliefs throughout this paper.)	Scale	5
Gender	Dichotomous	2
Introductory Leadership Course	Nominal	3 sections of the course

Leadership Scales

For the purposes of this study, the following scales were used: the leader self-definition scale, the motivation to lead scale, the leadership self-efficacy scale, the developmental self-efficacy scale, and the systemic vs. hierarchical attitudes and behavior scale. On the post-test only, a series of questions were included to for comparison to experiences outside of the classroom. Each scale is briefly described in the following paragraphs.

Rus et al. (2010) created a leader self-definition scale and described “self-definition as a leader implies self-categorizing as a member of the leader category as well as seeing the self as similar to the category prototype” (p. 512). The authors specified and tested a model of leader

self-definition on a seven point Likert-scaled item measure of the construct. Their research reported sufficient internal consistency for the scale with Cronbach's alpha .90. A sample item is, "Being a leader is important to who I am."

Chan and Drasgow (2001) specified and tested a three factor model of motivation to lead based on a 27 item Likert-scale of the construct. Their research reported sufficient internal consistency for the three factors of Affective-Identity MTL (liking to lead), Non-calculative MTL (costs and benefits associated with leading), and Social-Normative MTL (leading out of duty or responsibility) with Cronbach's alpha ranging from .65 to .91. When comparing the fit of a three factor model to an alternative single-factor model, goodness-of-fit indices were .85 and .59, respectively. The Chan and Drasgow (2001) measure of MTL was preferable to those presented by McClelland (1975) and Miner (1978), as it relied on a psychometrically sound measure rather than the ambiguity of projective techniques.

The leadership self-efficacy scale is an eight-item questionnaire which measures a leader's confidence in his or her abilities to lead (Murphy, 1992). The internal reliability for these measures is relatively high ($\alpha = .806$). A sample item from this questionnaire is, "I am confident of my ability to influence a work group that I lead." Responses are recorded on a five point Likert scale (1 – Strongly Disagree, to 5 – Strongly Agree). This measure has been validated.

Developmental self-efficacy measured a person's confidence to develop his or her own leadership (Reichard et al., in press). This scale is an eleven item questionnaire which Reichard et al. (in press) adapted from Potosky and Ramakrishma's (2002) study on learning self-efficacy. The internal reliability for these measures is relatively high ($\alpha = .805$). A sample item from this questionnaire is, "I believe that, with training, I can develop into an exemplary leader."

Responses are recorded on a five point Likert scale (1 – Strongly Disagree, to 5 – Strongly Agree). Reichard et al. (in press) is preparing a manuscript for publication which will support the validity of this tool, which includes an analysis of factor structure, and testing convergent, discriminant, and incremental validity.

Wielkiewicz (2000) identified and tested a two factor model of leaders' attitudes and beliefs based on a 27 item Likert-scale of the construct. His research reported sufficient internal consistency for the two factors of hierarchical thinking and systemic thinking with Cronbach's alpha ranging from .84 to .87. A sample item for systemic thinking is, "Leadership processes involve the participation of all organization members." A sample item for hierarchical thinking: "A leader should maintain complete authority."

Support for selection of leadership scales. Day et al. (2009) described identity as a multifaceted construct that includes "attributes, values, knowledge, experiences, and self-perception" (p. 183). Because leader identity is influenced by the way one perceives himself or herself, the scales that were chosen provide information on underlying processes or psychological constructs that may inform one's self-concept such as leader self-efficacy and developmental self-efficacy. A person rooted in a strong leader identity, will be motivated to act in a way which is consistent with that identity. Day et al. (2009) supported this when they considered the elements that are "most important to leader development" and state that "identity provides a basis for motivation" (p. 184). For this reason, the motivation to lead scale was included.

Lastly, leaders grow as a result of experiences and learning opportunities such as courses. Therefore, it is suggested that "leader identities are built through the integration of learning and leading experiences with the self" (Day et al., 2009, p. 185). Therefore, systemic vs. hierarchical

attitudes and beliefs scale was included to explore to what extent if any there are changes in viewpoints on leadership. The scales were chosen to explain some of the underlying processes associated with developing a leader identity and the relationships among these factors.

Data Collection and Analysis

Data Collection for Institution A

In the spring semester of 2015, the pre-test and post-test instruments were administered to the students taking a leadership course. A person who was not the instructor administered the surveys to students in the respective courses on their first day of class. In the fifteenth week of the course, a person who was not the instructor attended the class and asked the students to take the post-test. Each student received a cover letter from the researcher stating the purpose of the study, average time of completion, the confidentiality of their data, the lack of risks associated with their participation, and information about being entered into a raffle for one of ten \$25 gift cards for Amazon. Lastly, students were asked to check a box that designated their willingness to participate (see *Appendix A*).

The participants completed the assessment, including scales on the following measures: the leader self-definition scale, the motivation to lead scale, the leadership self-efficacy scale, the developmental self-efficacy scale, the systemic vs. hierarchical attitudes and beliefs scale; and a series of questions to consider demographics and unique experiences including: 1) gender, 2) participation in co-curricular opportunities, 3) institution, 4) section of course, and 5) participation in leadership experiences outside of the classroom (see *Appendix E*).

Data Collection for Institution B

In the spring semester of 2015, the pre-test and post-test instruments were administered to the students taking a leadership course. Each student received an email from the researcher

stating the purpose of the study, average time of completion, the confidentiality of their data, the lack of risks associated with their participation, and information about being entered into a raffle for one of ten \$25 gift cards for Amazon. Lastly, students were provided a link to a survey and the instructions on how to participate (see *Appendices B and C*).

Since the course sections met at different times, students were given one week to complete the assessment in the first week of the class. Two reminder emails were sent to encourage participation both three days and five days after the initial survey was sent. In the 15th week of the course, the researcher sent the post-test survey. Similar to the pretest, reminder emails were sent three and five days after the initial survey was distributed (see *Appendices B and C*).

The participants completed the assessment including scales on the following measures the leader self-definition scale, the motivation to lead scale, the leadership self-efficacy scale, the developmental self-efficacy scale, the systemic vs. hierarchical attitudes and beliefs scale; and a series of questions to consider demographics and unique experiences including: 1) gender, 2) participation in co-curricular opportunities, 3) institution, 4) section of course, and 5) participation in leadership experiences outside of the classroom (see *Appendix E*).

Data Collection for Comparison Group

In the spring semester of 2015, the pre-test and post-test instruments were administered to the students taking an organizational psychology course. Each student received a handout from the researcher stating the purpose of the study, average time of completion, the confidentiality of their data, the lack of risks associated with their participation and information about being entered into a raffle for one of ten \$25 gift cards for Amazon. Lastly, students were provided a link to a survey and the instructions on how to participate (see *Appendix D*). Institution B had a

psychology research participation requirement for students enrolled in entry level psychology classes. Therefore, students were required to complete up to five hours of research credits or, as a replacement, summarize the methodology and findings of a published research article.

The participants completed the assessment, including scales on the following measures: the leader self-definition scale, the motivation to lead scale, the leadership self-efficacy scale, the developmental self-efficacy scale, the systemic vs. hierarchical attitudes and beliefs scale; and a series of questions to consider demographics and unique experiences including: 1) gender, 2) participation in co-curricular opportunities, 3) institution, 4) section of course, and 5) participation in leadership experiences outside of the classroom (see *Appendix E*).

Data Analysis

Descriptive and inferential statistics were used to analyze the data collected. The data set was analyzed using *Statistical Package for the Social Sciences (SPSS) 21.0*. The variable data was coded and entered into SPSS. The analysis procedures are described below.

Research Questions and Analysis:

1. Were there differences in students' pre-test and post-test scores at the beginning and the end of a leadership class when comparing the constructs (motivation to lead, leadership self-efficacy, developmental self-efficacy, systemic vs. hierarchical attitudes and beliefs about leadership) in regard to a student's leader identity? In order to analyze this question, a paired sample t-test was conducted. The independent variable in this study was a leadership course. The dependent variables were motivation to lead, efficacy, systemic vs. hierarchical attitudes and beliefs, and leader identity.
2. Was there a statistically significant difference between males and females on their pre-test and post-test identity score? In order to analyze this question, a mixed ANOVA was

conducted. The independent variables in this study were gender and change over time. The dependent variable was leader identity.

3. To what extent did the constructs (motivation to lead, leadership self-efficacy, developmental self-efficacy, systemic vs. hierarchical attitudes and beliefs about leadership) predict leader identity? In order to analyze this question, a multiple regression was performed. The independent variables were motivation to lead, leadership self-efficacy, developmental self-efficacy, and systemic versus hierarchical attitudes and beliefs about leadership. The dependent variable was leader identity.
4. Were there differences among the three course-sections of leadership classes and the gain/loss score on a students' leader identity? A one-way ANOVA was the statistical test conducted to answer this question. The independent variable was the section of the leadership course. The dependent variable was the gain/loss score on leader identity.
5. Was there a difference in students' leader identity scores between the students who participated in the introductory leadership theory course and those who participated in the organizational psychology class? A Mann-Whitney U test was the statistical test conducted to answer this question. The independent variable was enrolling in a leadership course or enrolling in an organizational psychology. The dependent variable was the gain/loss score on leader identity.

The results of the weak quasi-experimental pre-test and post-test design with an intervention and comparison group, as well as the results of the complex associational question, are reported in the results section in chapter four. Any interactions among the extraneous variables and comparison group are presented in chapter four.

Internal and External Validity for Study

In order to manage for measurement error, internal and external validity needed to be considered (Field, 2013). For this study, the internal validity conveyed the extent to which the independent variable predicted a relationship with the dependent variable (Gliner et al., 2009). In this quasi-experimental, associational study, the relationships between leader identity and/or students participating in a leadership course were considered in relationships to other variables (Thorndike, 1997). Given students self-selected into a leadership course, the collection of pre-test and post-test data allowed characteristics of the students to be compared before and after the leadership course, which strengthened the study's internal validity.

In addition, controlling for experiential and environmental variables allowed the researcher to review the prior experiences of students who described themselves as having a leader identity and to explain the experiences of the students who did not identify as leader. To strengthen the validity of the study, the researcher ruled out teacher influence by comparing the three sections of the course. Even with these approaches being taken to increase the validity of the study, these results needed to be considered while acknowledging the following bias that could not be removed from the study – maturation, selection bias as a result of students self-selecting into the course, and repeated testing bias – because the same measures were used on the pre-test and post-test.

The external validity of the study considers how generalizable the study was to the broader population (Gliner et al., 2009). In this study, students being studied were those who were self-selecting into a leadership course. Therefore, the results will only be generalizable to other students who were taking a similarly constructed leadership course. However, this

approach aligns with the conceptual framework for this study in that a person might anticipate that taking a leadership course could influence a student's leader identity.

CHAPTER 4: RESULTS

Participants and Data Collection

Participants in this study were undergraduate students (N=109) enrolled in a leadership theory course (experimental group) or an organizational psychology course (comparison group) and attended one of two institutions: a small private liberal arts college (Institution A) or a large public research university (Institution B). The number of cases in the experimental group from both Institution A and Institution B combined was 95. Individuals in the comparison group were enrolled in an organizational psychology class at Institution A, which included two weeks of content related to leadership development; the number of cases for this group was 14.

Data were collected from all three groups including: Institution A experimental group, Institution A comparison group, and Institution B experimental group only. The Institution A data were collected using an electronic survey tool, and the Institution B data were collected using a paper-based survey. The data were gathered in a pre-test and post-test format and then paired; if participants did not complete the pre-test or the post-test, their results were eliminated. Additionally, three participants were removed from the data set because they previously participated in the same course as the experimental group. Lastly, minor errors were made in the data collection: one item was omitted from Wielkiewicz (2000) – the leader attitudes and beliefs scale; and there was a typographical error in item six of the Chan and Drasgow (2001) motivation to lead scale.

Descriptive Statistics

The primary variable considered was leader identity which is described as the “knowledge, experiences, and self-perceptions [a person has built about him or herself] through the integration of learning and leading experiences with the self” (Day et al., 2009, p. 184-185).

This variable was measured using a leader self-definition scale by Rus et al. (2010) which defines “self-definition as a leader...as self-categorizing as a member of the leader category as well as seeing the self as similar to the category prototype” (p.512). The supporting variables considered in this analysis were motivation to lead, leadership self-efficacy, developmental self-efficacy, and systemic versus hierarchical attitudes and beliefs about leadership. When analyzing the descriptive statistics, the overall *N* ranged from 107-109, the minimum and maximum for each variable ranged from 1-5, and the mean ranged from 3.14 to 4.16. The majority of the variables were normally distributed with the exception of the following being skewed: gain score for leader identity, and the variable discerning which individuals took either the leadership theory class (experimental) or the organizational psychology class (comparison). A summary of the variables used in this study can be found in Table 2 and a summary of the means and standard deviations for the variables can be found in Table 3.

Table 2

Summary of Variables considered to predict a Students' Leader Identity.

Variable			
Description	Type	Levels	Independent or Dependent
Leader Identity Total, pre-test	Scale	5	Dependent
Leader Identity Total, post-test	Scale	5	Dependent
Leader Identity Gain Score	Scale	5	Dependent
Motivation to Lead Total, pre-test	Scale	5	Both
Motivation to Lead Total, post-test	Scale	5	Both
Motivation to Lead Gain Score	Scale	5	Both
Systemic Attitudes and Beliefs about Leadership Total, pre-test	Scale	5	Both
Systemic Attitudes and Beliefs about Leadership Total, post-test	Scale	5	Both
Systemic Attitudes and Beliefs about Leadership Gain Score	Scale	5	Both
Hierarchical Attitudes and Beliefs about Leadership Total, pre-test	Scale	5	Both
Hierarchical Attitudes and Beliefs about Leadership Total, post-test	Scale	5	Both
Hierarchical Attitudes and Beliefs about Leadership Gain Score	Scale	5	Both
Leadership self-efficacy Total, pre-test	Scale	5	Both
Leadership self-efficacy Total, post-test	Scale	5	Both
Leadership self-efficacy Gain Score	Scale	5	Both
Developmental self-efficacy Total, pre-test	Scale	5	Both
Developmental self-efficacy Total, post-test	Scale	5	Both
Developmental self-efficacy Gain Score	Scale	5	Both
Gender	Dichotomous	2	Independent
Experimental group took leadership theory class (LEAD 10 or AGED 260) comparison group took Psych 37	Dichotomous	2	Independent
Instructor teaching section of leadership course	Nominal	3	Independent

Table 3
Means and Standard Deviations of Variables

Means and Standard Deviations		
Variable	Mean	Standard Deviation
Leader Identity Total, pre-test	3.71	.63
Leader Identity Total, post-test	3.81	.69
Leader Identity Gain Score	.09	.73
Motivation to Lead Total, pre-test	3.68	.39
Motivation to Lead Total, post-test	3.71	.36
Motivation to Lead Gain Score	.03	.28
Systemic Attitudes and Beliefs about Leadership Total, pre-test	4.16	.41
Systemic Attitudes and Beliefs about Leadership Total, post-test	4.23	.38
Systemic Attitudes and Beliefs about Leadership Gain Score	.08	.39
Hierarchical Attitudes and Beliefs about Leadership Total, pre-test	3.21	.43
Hierarchical Attitudes and Beliefs about Leadership Total, post-test	3.14	.56
Hierarchical Attitudes and Beliefs about Leadership Gain Score	-.07	.53
Leadership Self-Efficacy Total, pre-test	3.67	.55
Leadership Self-Efficacy Total, post-test	3.96	.48
Leadership Self-Efficacy Gain Score	.29	.57
Developmental Self-Efficacy Total, pre-test	4.02	.41
Developmental Self-Efficacy Total, post-test	4.05	.43
Developmental Self-Efficacy Gain Score	.03	.41

Research Question 1 Results

Research Question 1- Were there differences in students' pre-test and post-test scores at the beginning and the end of a leadership class when comparing the constructs (motivation to lead, leadership self-efficacy, developmental self-efficacy, systemic vs. hierarchical attitudes and beliefs about leadership, and students' leader identity)?

In Research Question 1, the independent variable is change over time and the dependent variables are motivation to lead, leadership self-efficacy, developmental-self efficacy, systemic versus hierarchical attitudes and beliefs, and leader identity. A paired samples t-test indicated that the leadership self-efficacy increased over time, $t(111) = -5.392, p = .001, d = -.51$. The difference was statistically significant, which, according to Cohen's (1988) guidelines, is a medium effect size. A paired samples t-test indicated that systemic leadership increased over time, $t(111) = -2.034, p = .044, d = -.19$. The difference, although statistically significant, is smaller than typical, using Cohen's (1988) guidelines. The results of a paired samples t-test for the remaining scales are not significant; these scales include developmental self-efficacy, hierarchical leadership attitudes and beliefs, leader identity, and motivation to lead.

Research Question 2 Results

Research Question 2- Was there a statistically significant difference between males and females on their pre-test and post-test identity score?

The independent variables are gender and change over time. The dependent variable is leader identity. A mixed ANOVA was conducted to assess whether there were differences between genders and if there was change over time in leader identity ratings. The following assumptions were tested: (a) independence of observations, (b) normality, and (c) sphericity. Independence was assumed for the between-groups variable (gender), and correlation was assumed for the within-groups variable (pre-test and post-test). For pre-test, normality was met. For the post-test, the results were skewed. The assumption of sphericity was violated. Results did not indicate a statistically significant main effect over time, $F(1, 107)=1.71, p = .19, \text{partial } \eta^2 = .02$ or a statistically significant interaction between gender, $F(1, 107)=.11, p = .74, \text{partial } \eta^2 = .001$. There was no interaction between the leader identity pre- and post-test and gender, $F(1,$

107)=.113, $p = .741$ partial $\eta^2 = .002$. Table 4 provides the means and standard deviations for the pre-test and post-test by gender.

Table 4

Means and Standard Deviations for Leader Identity Ratings Separately by Males and Females

Variable	Male		Female	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Time 1 – Pre-test	3.70	.57	3.71	.67
Time 2 – Post-test	3.77	.67	3.83	.72

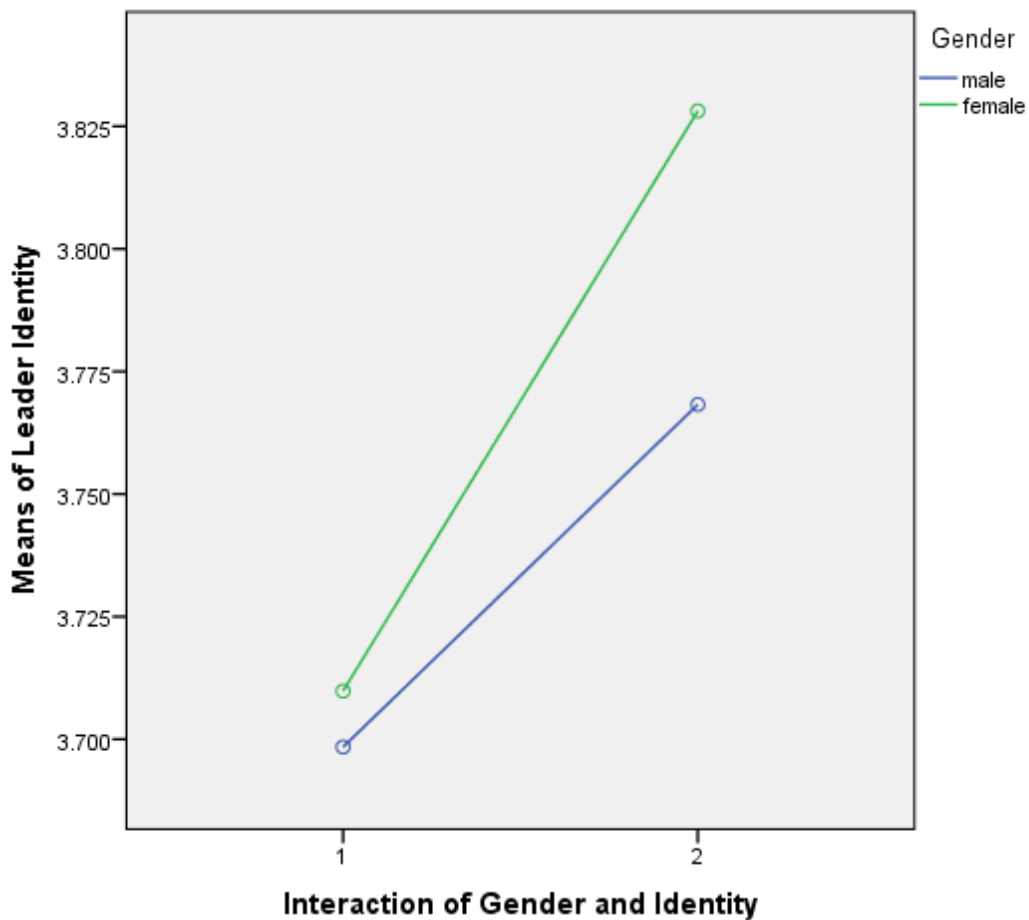


Figure 2. Plot interaction of time and gender. This figure graphically represents the lack of interaction between time and genders. Inspection of the figure suggests a linear trend for both males and females; the results were not significant. In addition, an exploratory analysis was conducted to determine if there was a statistically significant difference between males and

females on their pre-test and post-test scores on the following constructs: motivation to lead, leadership self-efficacy, developmental self-efficacy, and systemic vs. hierarchical attitudes and beliefs about leadership. The results were not significant.

Research Question 3 Results

Research Question 3- To what extent did the constructs (motivation to lead, leadership self-efficacy, developmental self-efficacy, and systemic vs. hierarchical attitudes and beliefs about leadership) predict leader identity?

A multiple regression was conducted to determine the best linear combination of the constructs (motivation to lead, leadership self-efficacy, developmental self-efficacy, and systemic vs. hierarchical attitudes and beliefs about leadership) for predicting leader identity. (Assumptions of linearity and normally distributed errors were checked and met. The tolerance levels were low, $1-R^2$ is .92, indicating that multicollinearity was present.) The means, standard deviations, and intercorrelations can be found in Table 5. This combination of variables did not significantly predict leader identity, $F(4,103) = 2.12, p = .08$. There was only one variable (efficacy combined – which is leadership self-efficacy combined with developmental self-efficacy) significantly contributing to the prediction. The adjusted R -squared value was .04. This indicates that 4% of the variance in leader identity was explained by the model. According to Cohen (1988), this was a medium effect size ($R=.28$). The beta weights, presented in Table 6, suggest leadership self-efficacy combined with developmental self-efficacy predicted that a student will identify as a leader and that motivation to lead, hierarchical leader attitudes and beliefs, and collaborative leader attitudes and beliefs do not contribute to the prediction.

Table 5

Means, Standard Deviations, and Intercorrelations for Leader Identity and Predictor Variables (N=108)

Variable	<i>M</i>	<i>SD</i>	1	2	3	4
Leader identity	.096	.74	.26**	.20*	.03	.09
Predictor variable						
1. Efficacy combined	.33	.81	-	.50**	.19*	.46**
2. Motivation to Lead	.03	.28		-	.15	.46**
3. Hierarchical LABS	-.06	.54			-	.31**
4. Systemic LABS	.08	.40				-
*p < .05; **p < .01.						

Table 6

Simultaneous Multiple Regression Analysis Summary for Efficacy Combined, Motivation to Lead, Hierarchical vs. Systemic Leaders Attitudes (LABS) and Beliefs on Leader Identity (N=108)

Variable	<i>B</i>	<i>SEB</i>	<i>B</i>
Efficacy Combined	.21	.08	.23*
Motivation to Lead	.31	.11	.19
Hierarchical LABS	-.02	.31	-.01
Systemic LABS	-.12	-.08	-.07
Constant	.03	-.12	

Note. $R^2 = .08$; $F(4,103) = 2.12$, $p = .08$

*p < .05; **p < .001

Research Question 4 Results

Research Question 4- Were there differences among the three course-sections of leadership classes and the gain/loss score on a students' leader identity?

A one-way ANOVA of the three leadership theory course-sections was calculated using the gain-loss score of leader identity. In addition, an exploratory analysis was calculated on the

five additional scales' gain-loss score (motivation to lead, leadership self-efficacy, developmental self-efficacy, and systemic vs. hierarchical attitudes and beliefs about leadership). The leader identity variable is skewed. The results indicated there was no statistically significant difference among the three sections of the leadership theory course on any of the six leadership scales. According to Cohen, the effect size for leadership self-efficacy was large ($\eta=.52$) and the effect size for systemic attitudes and beliefs about leadership was between medium and small ($\eta=.20$). Table 7 compares the means and standard deviations of the three course sections of the leadership theory class. Table 8 shows the one-way ANOVA on each of the six scales (leader identity, motivation to lead, leadership self-efficacy, developmental self-efficacy, and systemic vs. hierarchical attitudes and beliefs about leadership).

Table 7

Means and Standard Deviations Comparing Three Course Sections of Leadership Theory Classes

Class Section	n	<u>LSD</u>		<u>MTL</u>		<u>LSE</u>		<u>DSE</u>		<u>LABS - H</u>		<u>LABS - C</u>	
		M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
1	4	-.14	.20	.06	.11	-.07	.25	.00	.17	-.29	.29	.06	.12
2	11	-.01	.40	.09	.33	.44	.42	-.01	.43	.18	.45	.10	.28
3	80	.11	.79	.02	.29	.34	.57	.05	.51	-.13	.51	.08	.38
Total	96	.09	.74	.03	.29	.33	.55	.04	.50	-.10	.50	.08	.36

Table 8

One-Way Analysis of Variance Summary Table Comparing Three Course Sections on Leader Identity, Motivation to Lead, Leadership Self-Efficacy, Developmental Self-Efficacy, Systemic Attitudes and Beliefs about Leadership, and Hierarchical Attitudes and Beliefs about Leadership.

Source	<i>df</i>	SS	<i>MS</i>	<i>F</i>	<i>P</i>	η^2
Leader Identity						
Between Groups	2	.37	.18	.33	.72	.007
Within Groups	93	51.65	.56			
Total	95	52.02				
Motivation to Lead						
Between Groups	2	.05	.02	.29	.75	.006
Within Groups	93	7.71	.08			
Total	95	7.76				
Leadership Self-Efficacy						
Between Groups	2	.038	.39	1.31	.28	.27
Within Groups	93	14.57	.30			
Total	95	14.61				
Developmental Self-Efficacy						
Between Groups	2	.37	.02	2.09	.13	.003
Within Groups	92	14.57	.16			
Total	94	14.61				
Systemic Attitudes and Beliefs about Leadership						
Between Groups	2	1.02	.51	2.09	.13	.04
Within Groups	93	22.76	.25			
Total	95	23.79				
Hierarchical Attitudes and Beliefs about Leadership						
Between Groups	2	.37	.18	.33	.72	.007
Within Groups	93	51.66	.56			
Total	95	52.02				

Research Question 5 Results

Research Question 5- Was there a difference in students' leader identity scores between the students who participated in the introductory leadership theory course and those who participated in the organizational psychology class?

The dependent variable, leader identity, was skewed, therefore, a Mann-Whitney U test was performed to compare the students who participated in the introductory leadership theory course (experimental group) to the students who participated in the organizational psychology class (comparison group). The 95 students in the introductory course have slightly higher mean ranks (55.33) than the 14 students in the organizational psychology course (52.75) on the leader identity scale, $U=633.5$, $p=.77$, $r=-.0$ which, according to Cohen (1988) is a smaller than typical effect size.

Exploratory Analysis, Research Question 6 Results

Research Question 6 - A) Was there a statistically significant difference between students' pre-test and post-test score in regard to the average leader identity score? B) Was there a statistically significant difference between the students who participated in the introductory leadership theory course (experimental group) and those who participated in the organizational psychology class (comparison group) in regard to the average leader identity score? C) Was there a statistically significant interaction of pre-tests and post-test scores and students who participated in the introductory leadership theory course (experimental group) and those who participated in the organizational psychology class (comparison group) in regard to the leader identity score?

A mixed ANOVA was conducted to assess whether there were changes over time (pre-test or post-test) as well as experimental versus comparison group differences in identity ratings. The following assumptions were tested: (a) independence of observations, (b) normality, and (c) sphericity. Independence was assumed for the between-groups variable (experimental or comparison group) and correlation was assumed for the within-groups variable (pre-test and post-test). For pre-test, normality was met. For the post-test, the results were skewed. The

assumption of sphericity was violated. Results did not indicate a statistically significant main effect over time $F(1, 107)=1.62, p =.20, \text{partial } \eta^2 = .02$ or a statistically significant interaction between the pre-test and post-test for the comparison or experimental group $F(1, 107)=.02, p =.88, \text{partial } \eta^2 = 0$. There was no interaction between the pre-test and post-test of leader identity and the comparison or experimental group, $F(1, 107)=.21, p =.65, \text{partial } \eta^2 = .002$.

Table 9 provides the means and standard deviations for the pre-test and post-test by experimental or comparison group.

Table 9

Means and Standard Deviations for Leader Identity Ratings Separately by Introductory Leadership Theory Course (Experimental Group) and Organizational Psychology Course (Comparison Group)

Variable	<u>Introductory Leadership Theory Course (Experimental Group)</u>		<u>Organizational Psychology Course (Comparison Group)</u>	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Time 1 – Pre-test	3.71	.63	3.68	.62
Time 2 – Post-test	3.80	.71	3.87	.70

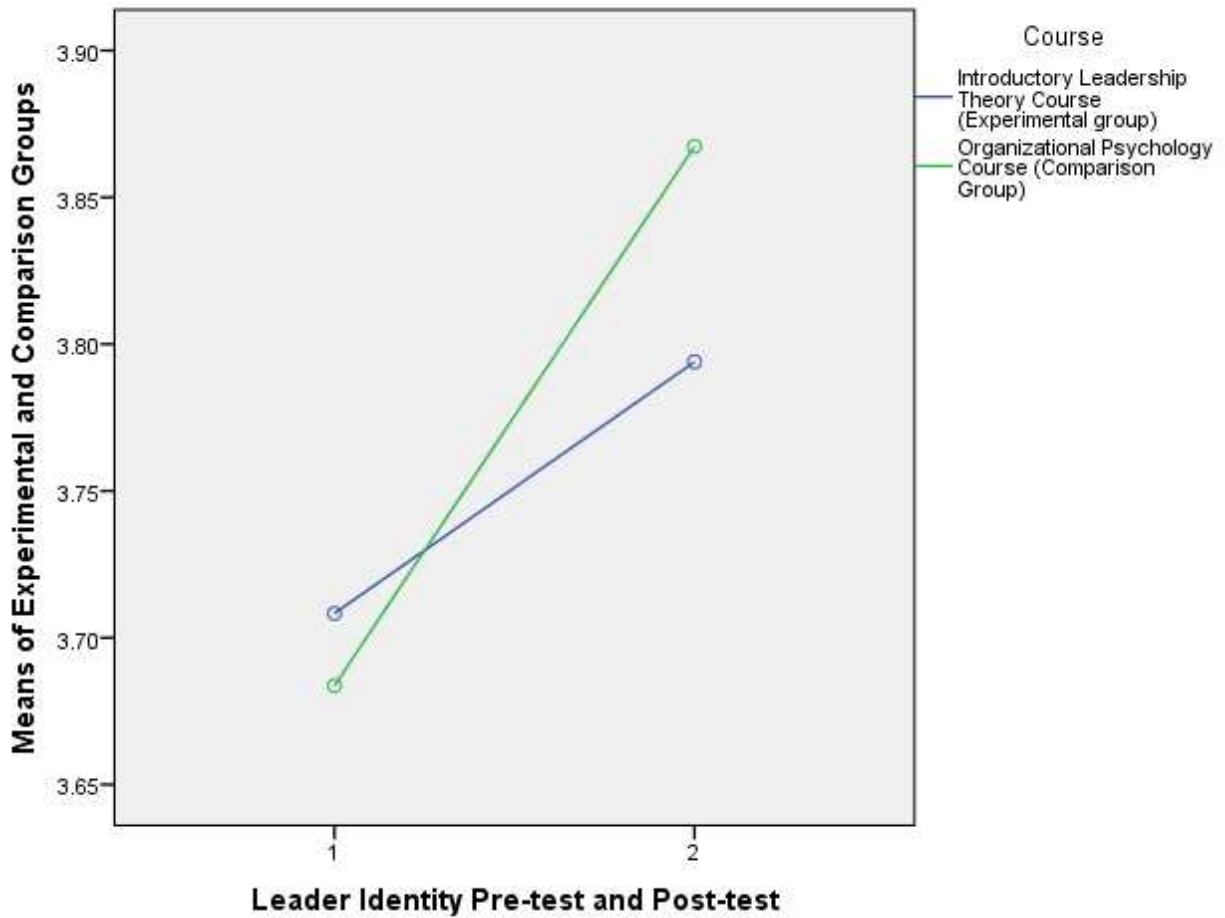


Figure 3. Plot interaction over time for the introductory leadership course (experimental group) and organizational psychology course (comparison group). This figure graphically represents the interaction over time of the experimental and comparison group. Inspection of the figure suggests a disordinal linear trend for both the comparison group and the experimental group and the results are not significant.

CHAPTER 5: DISCUSSION

Introduction

Students enter college with implicit beliefs and definitions of a leader and leadership which often guide their thinking and behaviors (Lord & Maher, 1991). In order to assist students in their development as a leader, it is critical that educators provide opportunities for them to explore their self-concept as a leader (Hall, 2004). Literature suggests when a student considers oneself a leader, the student is more likely to engage in leader roles and leadership development experiences (Day & Harrison, 2007). Therefore, the purpose of this study was to explore the extent to which the constructs (motivation to lead, leadership self-efficacy, developmental self-efficacy, and systemic vs. hierarchical leadership attitudes and behaviors) predicted a change in leader identity for college students registered in an introductory leadership theory course.

Throughout this chapter, I describe and attribute meaning to the findings of this research study. Then, I compare and contrast these results in relationship to the literature and prior research. Lastly, I conclude the chapter by linking the findings of this study to suggestions for practice and recommendations for future research.

Interpretation of Findings

Within the sample of undergraduate students taking a leadership theory course, this study explored the difference between students on a number of constructs at the beginning and end of the course. Surprisingly, students in this study did not appear to broaden their self-concept as a leader as a result of taking a course. It appears they were no more or less likely to say, "I am a leader".

Development of Leader Identity

Leader identity development was the primary variable of interest in this study. Students did not appear to develop a leader identity as a result of taking the leadership course. My research did not explore what influences the internal adoption process of leader identity. The lack of a significant finding regarding the development of a leader identity suggested that an exclusively classroom leadership course may be too far removed from the experiential learning context to influence leader identity development. In the context of a classroom environment, students were removed from the practice of leadership. While they were learning new cognitive ways of thinking about leadership, they were not in a context where they could integrate these new cognitive structures into their self-perception.

Leader development literature suggested exploring leader identity while considering the context, culture, and exchange between followers (Hannah & Avolio, 2008). The lack of findings may support the literature in that a leadership course may be too far removed from the leadership setting or situation (i.e. context, culture, or exchange between followers) to influence identity development. The literature on self-awareness and developing a self-construct discussed the importance of connecting knowledge to a person's experiences and the individual internally integrating this awareness into their own self-perceptions (Hall, 2004). The lack of findings appear to support the literature, suggesting that the process for developing a leader identity needs to be closely connected to one's experiences as a leader and may require more engagement than is present in a theoretical classroom experience.

Development of Leadership Efficacy

Students in this study who took a leadership theory course appeared to have developed a greater sense of leadership efficacy. This finding suggested that students who took a leadership

course were more confident in their ability to lead. It also supported existing research which showed that efficacy is an important antecedent in leader developmental readiness as well as leader development (Hannah et al., 2008).

Systemic View of Leadership

In this study, students who took a leadership theory course appear to have shifted their view of leadership to be more systemic and collaborative. These results are meaningful because they indicate that students may have moved away from a hierarchical perspective on leadership, where a leader is defined based on position or authority, to characterizing leadership as a process where a leader is part of a system and displaying collaborative rather than authoritative behaviors (Wielkiewicz, 2000). As students shift their perspective to a systematic and process-oriented approach, they see themselves as able to engage in leadership behaviors regardless of their position; they begin to experiment with influencing the outcomes of a group process at all levels within the group (Komives et al., 2009). My finding supported existing research which described students entering college with a hierarchical perspective of leadership and this perspective shifting to a systemic view of leadership as they have more leadership experiences (Komives et al., 2005; Wielkiewicz, 2000).

Motivation to Lead

In this study, students' scores for motivation to lead did not change as result of taking a leadership theory course. These findings suggested that students in this study were no more likely to want to lead, feel a responsibility to lead, or see the benefits of leading as a result of taking a leadership course. My findings do not support the literature; Chan and Drasgow (2001) suggest motivation to lead is an antecedent to leader development. Additionally, Chan and Drasgow (2001) view the leader development process as multi-dimensional including interests,

past experiences, participation in roles as well as training, knowledge, and skills for leading. Prior research also suggested motivation to lead was related to the effort a person allocated towards a task and the individual's participation in leadership roles (Chan & Drasgow, 2001; Rosch et al., 2015).

Plausible reasons for this inconsistent finding were that students entered the course with a high motivation to lead; therefore, no change occurred over the progression of a semester. Another reason may be students self-selected into the course because they were interested in the subject matter and recognized the value of learning leadership for personal and professional growth. Lastly, accumulated leadership experience is described as an antecedent to leading, and suggests individual differences may be a result of the extent of one's experience (Chan & Drasgow, 2001; Zaccaro et al., 1991). Said another way, these learning experiences (i.e. interests, past experiences, participation in leadership roles, etc.) appear to be more complex and multi-faceted than what occurs in a solely classroom leadership theory course. A course may provide limited opportunities for linking learning with past experience making it difficult for students to experience a change in motivation to lead.

Developmental Self-Efficacy

Lastly, students' scores for developmental self-efficacy did not change as result of taking a leadership theory course. The implication of this finding, for students in this study, suggests that one's belief in his or her ability to develop leadership skills by participating in a leadership course did not change as a result of taking the course. Similar to motivation to lead, rationale for this finding may be that students self-selected into the course already possessing a strong belief in their ability to develop leadership behaviors. In addition, the structure of the study which separated the student's practical and experiential opportunities from learning in the classroom

may have influenced the outcome. Contrary to the findings in this study, the literature tells us that developmental self-efficacy (DSE) is an antecedent to displaying leadership behavior and would likely increase through involvement in leadership experiences (Reichard et al., in press). Additionally, research on DSE further challenges these opposing results by asserting the following: students with higher levels of DSE engaged in leader development activities; DSE influenced student's intentions to develop as a leader by incorporating leader development behaviors into their leader roles; and individuals with a low DSE improved over time more than individuals with a high DSE (Reichard et al., in press).

Gender in Relation to Leader Identity

Results from this study suggest that men and women did not differ when developing a leader identity over the course of a semester. The implication of this finding appeared to suggest that gender may not play a direct role in leader identity development. Rationale for this finding could be two-fold: 1) students already see themselves as leaders and are self-selecting into the course, and 2) the classroom is a more neutral environment where students may not experience gender stereotypes as it relates to their identity. Contrary to this finding, the literature points to gender stereotypes having an influence on perceived ability in leadership roles; women are seen to be more communal (warm and nurturing), whereas men are seen to be more agentic (independent and assertive; Hoyt, 2005). The classroom settings may not have provided a context and experiences for these perceived gender stereotypes to be present. Additionally, in leadership roles there is a tendency for followers to prefer for agentic styles and when women appear more agentic this behavior is held against them (Hoyt, 2005). Literature on gender and efficacy states that men are more likely to be confident in their leadership skills than women (McCormick et al., 2002).

Leadership–efficacy, combined with developmental self-efficacy, predicts a leader identity.

Combining leadership efficacy (LE) with developmental self-efficacy (DSE) was found to predict leader identity for participants in this study. This finding denotes that students who were confident in their ability to lead (LE) and also believed in their ability to develop leadership skills (DSE) appear to be more likely to self-identify as a leader. This finding supported the literature in that individuals who have a high level of leadership efficacy often had prior leadership experience and often attempted to assume leadership positions (McCormick et al., 2002; Rosch et al., 2015). Efficacy is an antecedent to engaging in leadership behaviors and having the motivation to lead (Chan & Drasgow, 2001; Hannah et al., 2008; Murphy & Ensher, 1999; Watson et al., 2001). Research on developmental self-efficacy suggests that individual's intentions to learn from leadership experience and engage in leader behaviors are more present with higher levels of DSE (Reichard et al., in press). Efficacy is impacted by many factors including identity, self-awareness, groups, and structural contexts (Hall, 2004; Hannah et al., 2008). Therefore, my findings reinforce the literature and would lend a possible interpretation that leadership efficacy and developmental self-efficacy together may predict a leader identity. However, this finding should be interpreted with caution due to a low effect size.

Difference between Leadership Course and Comparison Course

The result of this study indicated no difference related to student leader identity between a sample of students who took the leadership course and a separate sample of students who took a psychology comparison course. This finding suggests that students taking a leadership theory course were no more likely to say, "I am a leader," than students taking a psychology course. This finding is surprising, given the students in the leadership course were exposed to more

leadership content than those taking the psychology courses; respectively, 16 weeks of leadership theory content in contrast to two weeks of leadership content.

While my research did not support a change in leader identity, there are a number of potential reasons for this outcome. First, students are self-selecting into the psychology course (comparison group), and they may already consider themselves to be leaders. Second, the comparison class included multiple weeks of leadership content, thereby exposing students to leadership content in both courses (leadership theory and psychology) and making it more difficult to find a difference between students taking each course. Third, both institutions strongly encourage leader development practices. One of the institutions includes leader development in its college mission and the other institution has strong campus-wide support for leader development including academic and co-curricular programs. These interpretations align with the literature which tells us that those who identify as a leader are more likely to engage in leadership developmental experiences (Day & Harrison, 2007). It also reminds us that leaders' identities are built as a result of experiences and learning opportunities (Day et al., 2009).

When considering these findings further, it is interesting to note that students taking the organizational psychology course received a smaller 'dosage' of leadership content (2 weeks) in comparison to the leadership theory course where there was 16 weeks of content delivered. There are potential factors that may have caused this finding. First, according to the instructor, the organizational psychology course is a higher level course which may deliver more advanced content. Related to this observation, students in this course are often juniors and seniors who have a strong sense of themselves. The class includes a group project which may encourage the development of leadership skills. Therefore, after reflecting upon the outcomes of this study, this course may not have been the best choice for a comparison group. These reflective thoughts

are provided to shape future research studies and encourage careful selection of the comparison group.

Differences among Three Course-Sections

In this study, no difference was found in the three course sections where leadership theory was taught. The connotation of this finding dismissed teacher influence as a possible limitation for this study. Therefore, who taught the course and its structure does not appear to influence the outcomes of this study.

Implications for Practice

The findings of this study have implications for leadership educators in both student affairs and academic affairs. Leader efficacy, developmental self-efficacy, and motivation to lead are important constructs and antecedents to student leader development. For example, when a student is motivated to lead (e.g. possesses a desire, feels a sense of responsibility, or sees the benefits of leading), he or she will be more likely to engage in development opportunities (Chan & Drasgow, 2001). When motivation to lead is present, students are more likely to engage in leader roles and opportunities to lead, which build leader efficacy and provide opportunity to explore the complexities present in leadership situations (Reichard & Walker, 2016).

Additionally, when a student has confidence in his or her ability to lead, and in his or her ability to develop as a leader, he or she will likely put himself or herself in situations to gain knowledge, skills, and competencies for growth (Murphy & Johnson, 2016). Similarly, when motivation to lead and confidence are not present, students may lack the foundational elements necessary to fully engage in and benefit from training and experiential opportunities. It appears that leader

efficacy, developmental self-efficacy, and motivation to lead may be important precursors for student leader development.

Designing Co-Curricular Opportunities

As educators shape developmental opportunities such as co-curricular programs, coursework, and practical leader engagement experiences (e.g. student organizations, athletic teams, performing arts, etc.), they should consider which of the aforementioned antecedents are present in the learners (Reichard & Walker, 2016). Does the program design need to help students to develop confidence in their ability to lead and help learners to see themselves as leaders, before adding in knowledge and skill development? If the answer to this is yes, it may be beneficial to include efficacy-building activities and self-awareness exercises that broaden a student's self-concept prior to the introduction of specific skill development areas such as social skills, conflict management, or team dynamics.

When the learning experiences are multi-faceted and experiential in nature, it provides opportunities for students to begin to see themselves as leaders, practicing these skills in new leader roles. In particular, leader development appears to require a strong grasp of the andragogical approaches in order to create transformational learning opportunities for students (Knowles, Holton, & Swanson, 2014). When shaping these learning experiences, adult learning principles suggest the learner is self-directed and internally motivated. Taking this into consideration in a non-classroom setting, leadership educators may want to present knowledge and skill building activities in a problem-based learning format. Structuring learning activities in this way requires students to collaborate with others and to apply newly acquired skills in order to develop more complex leadership abilities. Educators need to identify leadership training opportunities where students are already engaged in learning such as student organizations,

athletic teams, and research laboratories (Thompson & Reichard, 2016). Then, educators should connect leadership training to these experiences, because students learn best when they can see the direct relevance of skills and how to apply those skills in their lives (Gegenfurtner, Veermans, Festner, & Gruber, 2009). In summary, context, structure, and timing of leadership programs matter to leader development (Thompson & Reichard, 2016).

Enhancing Classroom Learning

Additionally, educators might explore experiential learning modalities that strengthen the connection between classroom learning and individual leader development. Designing learning opportunities outside of the classroom that specifically connect to the content being taught in the classroom is an educational strategy that needs more attention. For example, if instructors created independent learning experiences using action learning strategies and incorporated leader efficacy, developmental-self efficacy, and motivation to lead constructs into those experiences, it might influence leader identity development in a leadership course. More research is needed to confirm this suggestion. However, it seems that embedding motivation to lead and efficacy building concepts into experiences connected with a leadership course where students are simultaneously gaining new cognitive frameworks for leadership theory might provide excellent opportunities to enhance mental complexity and meta-cognitive abilities in leaders.

Tactics to Develop Leader Efficacy, Developmental Self-efficacy, and Motivation to Lead

Specifically, leader efficacy and developmental self-efficacy are two areas that appear to enhance student leader development (Murphy & Johnson, 2016). Practitioners may want to encourage student involvement in various activities as an opportune way to build efficacy. Then, while students are participating, they are able to learn vicariously by observing others and experimenting with new leadership skills (Murphy & Johnson, 2016). Additionally, educators

can support this development process by coaching students to frame success and failure as part of the learning process, and encourage them to continue engaging in leadership experiences while developing new skills sets (Murphy & Johnson, 2016). Lastly, educators need to monitor the type of feedback provided to students, and ensure it goes beyond students' performance: when educators only focus on performance based feedback (i.e. the success of outcome) instead of the effort a student put into the situation, students can feel disillusioned and discouraged to continue to participate in important developmental opportunities. Therefore, feedback should also be focused on the amount of effort put into the situation and what students are learning from these experiences (Murphy & Johnson, 2016).

In addition, developmental self-efficacy can be enhanced when students set intentions to develop as a leader and then incorporate specific leader behaviors into their roles (Reichard et al., in press). For example, a student may want to practice his or her influence skills in a group setting; therefore, the student may want to set an intention to share his or her opinion once in each group meeting. This is an example of how to build confidence in one's ability to develop and to keep the student engaged in the growth process. Additionally, when students engage in goal setting and behavioral change processes, it demonstrates that leadership skills can be developed. The awareness that leadership can be developed is an important lesson for educators to emphasize as they lay the groundwork for students to engage in leader development experiences.

Lastly, motivation to lead encourages students to engage in experiences that develop leadership behaviors (Chan & Drasgow, 2001). As a leadership behavioral model, educators can glean numerous considerations from this framework. When designing experiences, educators need to consider the motivational reasons for students participating in learning opportunities, the

level of effort required, and the consistency at which they participate. Students may partake in a leadership course because it fulfills a requirement in a minor, or because they see the potential benefits of leading for their professional aspirations; the reason for participating influences the motivation level and the effort put forth by students. Mentors and advisors can be involved in the learning process by encouraging persistence and learning, helping students to overcome obstacles, and limiting negative developmental spirals (Rosch & Villanueva, 2016).

Implications for Future Research

There is limited research on college student leader identity development. Numerous researchers point to the need for a model of leader development that includes leader developmental readiness and describes motivational, developmental, and experiential factors that influence leader identity and behavior (Chan & Drasgow, 2001; Day et al., 2009; Lord & Hall, 2005; Komives, Mainella, Longenecker, Osteen, & Owen, 2006; Hannah & Avolio, 2008; Reichard & Walker, 2016). Future research needs to further clarify the antecedents to leader development and describe the process of how a person adopts an identity as a leader.

Additional research is needed to understand the leader self-definition process and address the measurement challenges associated with the leader identity process. Rus et al. (2010) indicate that the self-schema works by organizing information and experiences, then connects this information to one's identity. Therefore, when self-definitions are strong and a non-leader identity is activated, behaviors may be shaped differently than when the leader identity is activated (Rus et al., 2010). This creates challenges for researchers in measuring a leader identity because behaviors exhibited may be different depending on which identity is salient (e.g. leader identity or a different professional identity). For example, applying this concept to my study, in

a classroom setting, the identity that may be activated for a person could be “student,” and not “leader,” making it difficult to accurately measure a student’s leader identity.

Exploring the process through which a person, specifically a student, comes to self-identify as a leader is a critical area for additional research. DeRue and Ashford (2010) described the leader identity process as socially constructed, while Ibarra et al. (2010) label it a transition process where self-understanding and experience are equally important. More clarity is needed on this internal adoption process of leader identity in order to prescribe ways for a student to integrate leader identity into his or her self-concept. The fact that I did not find significant results for students developing a leader identity while taking a leadership course reinforces the importance of learning more about the ways an individual develops a leader identity. In doing so, educators would be better able to create experiential learning opportunities which support the leader identity adoption process.

If I could do it again, there are a number of elements of my study that I might do differently. I would conduct a mixed-method study and include qualitative strategies to explore the reasons each student was taking the leadership course and to further clarify his or her self-perceptions of oneself as a leader. Also, I would build into the study an opportunity for group interaction to more closely connect leadership practice to the classroom environment. Included in this modification to the study would be a peer-rating component that would explore if a person identifies as a leader and if that is noticed by their peers. In addition, I might select a different sample of students for the comparison group from an institution where leadership is not a qualification looked for in the admissions procedures. This would allow me to explore whether or not the sample of students used in this study had a pre-disposition for leadership. A final idea is to conduct the survey analysis at the end of the course. It has been noted that self-report

measures can over-estimate students' actual ability (Komives, Longerbeam, Mainella, Osteen, & Owen, 2009). Therefore, by shifting the data collection to the end of the course and asking students to rate themselves on the various constructs at the beginning and end of the course, the responses might be more accurate or realistic because students have a more cognitively complex view of self and leadership at the end of a course.

In considering Komives' et al. (2006) leader identity development (LID) model, additional quantitative research needs to be conducted to further explore the measures that have been created (Dugan & Komives, 2006, 2007). These measures could be compared to other leader identity measures such as Hiller's (2006) leader identity scale or Rus' et al. (2010) leader self-definition scale. Related to the LID model, more research could be done to explore the ways college students' implicit leadership theories shift from a hierarchical model to a collaborative model in college. Further exploring the LID model would help to explain the shift in college students' perceptions of self-leadership and the role it has in leader identity development.

Lastly, additional leader developmental readiness concepts could be explored in conjunction with leader identity. For example, might goal orientation (Button, Mathieu, & Zajac, 1996) have an impact on how students apply themselves and what students learn in a classroom environment? In addition, looking at self-concept clarity (SCC; Campbell et al., 1996) in conjunction with identity might provide interesting insights on how college students perceive their self-concept. College students are at a point in their lives where they are exploring their identity in many ways (e.g. career, hobbies, social identities, etc.). Therefore, additional research could explain how an evolving self-concept might influence leader identity development.

Conclusion

From years of working with college student leaders and the personal testimonials they share with me, it is hard to believe that a leadership course is not shaping one's self-perception as a leader. Therefore, I would alter ways of conducting the study and measuring identity before ruling out the notion that leader identity is not influenced by a classroom learning opportunity. Conceptualizing a leader identity and understanding the process for self-identifying as a leader is a complex process with numerous variables. Yet, as researchers describe, when individuals – especially college students – say, “I am a leader,” it opens doors for life-long learning opportunities in leader development (Hall, 2004).

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APPENDIX A

Institution A Paper-Based Survey Cover Page

Dear Participant,

My name is Sara Thompson and I am a researcher from Colorado State University in the Higher Education Leadership department. We are conducting a research study on the factors that predict a student's leader identity.

I would like you to take this in-class survey. Participation will take approximately 30 minutes. Your participation in this research is voluntary. If you decide to participate in the study, you may withdraw your consent and stop participation at any time without penalty.

I will keep your data confidential. While there are no direct benefits to you, I hope to gain more knowledge on the underlying factors that influence college student leader identity development. Students who participate will be entered into a drawing for one of ten \$25 Amazon gift cards.

There are no known risks to participating in this study. It is not possible to identify all potential risks in research procedures, but the researcher has taken reasonable safeguards to minimize any known and potential (but unknown) risks.

To indicate your willingness to participate in this research, please check the appropriate box below:

- Yes, I am willing to participate.
- No, I am not willing to participate.

If you have any questions about the research, please contact Linda Kuk at linda.kuk@colorado.state.edu, Sara Thompson at sethomp@colostate.edu or David Rosch (the person administering the survey) at dmrosch@illinois.edu. If you have any questions about your rights as a volunteer in this research, contact the Illinois IRB at: irb@illinois.edu; 217-333-2670.

APPENDIX B

Institution B Initial Email and Reminder Email to Section A

You are being invited to participate in a research study, which the Claremont McKenna College Institutional Review Board (IRB) has reviewed and approved for conduct by the investigators named here. This form is designed to provide you - as a human subject – with information about this study. The Investigator or his/her representative will describe this study to you and answer any of your questions. You are entitled to a copy of this form. If you have any questions or complaints about the informed consent process of this research study or your rights as a subject, please contact the IRB at the Claremont McKenna College Office of Institutional Research at (909) 607-8395 or IRB@cmc.edu. Also see www.cmc.edu/IRB for more information on research involving human subjects.

Project Title: Factors that influence leader identity development in college students

Principal Investigator: Sara Thompson

Dear Participant,

My name is Sara Thompson and I am a researcher from Colorado State University in the Higher Education Leadership department. We are conducting a research study on the factors that predict a student's leader identity.

I would like you to take an online survey. Participation will take approximately 30 *minutes*. Your participation in this research is voluntary. Course credit will be given for your participation. If you decide to participate in the study, you may withdraw your consent and stop participation at any time without penalty. The alternative to participating in this study is to summarize the methodology and findings of a published research article on psychological research.

The unique identifiers collected in this study will only be used to provide course credit. Then, they will be removed from the dataset. When I report and share the data to others, I will combine the data from all participants. I will keep your data confidential. While there are no direct benefits to you, I hope to gain more knowledge on the underlying factors that influence college student leader identity development.

There are no known risks to participating in this study. It is not possible to identify all potential risks in research procedures, but the researcher has taken reasonable safeguards to minimize any known and potential (but unknown) risks.

To indicate your willingness to participate in this research and to continue on to the survey, click here: https://claremontmckenna.col.qualtrics.com/SE/?SID=SV_djzQMifLfXA9pVX.

If you have any questions about the research, please contact Sara Thompson at sethomp@colostate.edu or her advisor Linda Kuk at Linda.Kuk@colostate.edu.

If you have any questions about your rights as a volunteer in this research, contact CMC IRB AT IRB_Researcher@cmc.edu or the CSU IRB at: RICRO_IRB@mail.colostate.edu; 970-491-1553.

Sara Thompson

Appendix B continued – Institution B Reminder E-mail to Section A

You are being invited to participate in a research study, which the Claremont McKenna College Institutional Review Board (IRB) has reviewed and approved for conduct by the investigators named here. This form is designed to provide you - as a human subject – with information about this study. The Investigator or his/her representative will describe this study to you and answer any of your questions. You are entitled to a copy of this form. If you have any questions or complaints about the informed consent process of this research study or your rights as a subject, please contact the IRB at the Claremont McKenna College Office of Institutional Research at (909) 607-8395 or IRB@cmc.edu. Also see www.cmc.edu/IRB for more information on research involving human subjects.

Project Title: Factors that influence leader identity development in college students
Principal Investigator: Sara Thompson

Dear Participant,

I would like you to remind you to take an online survey. Participation will take approximately 30 *minutes*.

My name is Sara Thompson and I am a researcher from Colorado State University in the Higher Education Leadership department. I am conducting a research study on the factors that predict a student's leader identity.

Your participation in this research is voluntary. Course credit will be given for your participation. If you decide to participate in the study, you may withdraw your consent and stop participation at any time without penalty. The alternative to participating in this study is to summarize the methodology and findings of a published research article on psychological research.

The unique identifiers collected in this study will only be used to provide course credit. Then, they will be removed from the dataset. When I report and share the data to others, I will combine the data from all participants. I will keep your data confidential. While there are no direct benefits to you, I hope to gain more knowledge on the underlying factors that influence college student leader identity development. Students who participate will be entered into a drawing for one of ten \$25 Amazon gift cards.

There are no known risks to participating in this study. It is not possible to identify all potential risks in research procedures, but the researcher has taken reasonable safeguards to minimize any known and potential (but unknown) risks.

To indicate your willingness to participate in this research and to continue on to the survey, click here: https://claremontmckenna.co1.qualtrics.com/SE/?SID=SV_djzQMifLfxA9pVX.

If you have any questions about the research, please contact Sara Thompson at sethomp@colostate.edu or her advisor Linda Kuk at Linda.Kuk@colostate.edu. If you have any questions about your rights as a volunteer in this research, contact CMC IRB AT IRB_Researcher@cmc.edu or the CSU IRB at: RICRO_IRB@mail.colostate.edu; 970-491-1553.

Sara Thompson

APPENDIX C

Institution B Initial Email and Reminder Email to Section B

You are being invited to participate in a research study, which the Claremont McKenna College Institutional Review Board (IRB) has reviewed and approved for conduct by the investigators named here. This form is designed to provide you - as a human subject – with information about this study. The Investigator or his/her representative will describe this study to you and answer any of your questions. You are entitled to a copy of this form. If you have any questions or complaints about the informed consent process of this research study or your rights as a subject, please contact the IRB at the Claremont McKenna College Office of Institutional Research at (909) 607-8395 or IRB@cmc.edu. Also see www.cmc.edu/IRB for more information on research involving human subjects.

Project Title: Factors that influence leader identity development in college students
Principal Investigator: Sara Thompson

Dear Participant,

My name is Sara Thompson and I am a researcher from Colorado State University in the Higher Education Leadership department. We are conducting a research study on the factors that predict a student's leader identity.

I would like you to take an online survey. Participation will take approximately 30 *minutes*. Your participation in this research is voluntary. Course credit will be given for your participation. If you decide to participate in the study, you may withdraw your consent and stop participation at any time without penalty. The alternative to participating in this study is to summarize the methodology and findings of a published research article on psychological research. Lastly, as your instructor for LEAD 10, your choice of how to participate in this study will not influence your grade in anyway.

The unique identifiers collected in this study will only be used to provide course credit. Then, they will be removed from the dataset. When I report and share the data to others, I will combine the data from all participants. I will keep your data confidential. While there are no direct benefits to you, I hope to gain more knowledge on the underlying factors that influence college student leader identity development. Students who participate will be entered into a drawing for one of ten \$25 Amazon gift cards.

There are no known risks to participating in this study. It is not possible to identify all potential risks in research procedures, but the researcher has taken reasonable safeguards to minimize any known and potential (but unknown) risks.

To indicate your willingness to participate in this research and to continue on to the survey, click here: https://claremontmckenna.co1.qualtrics.com/SE/?SID=SV_djzQMifLfxA9pVX.

If you have any questions about the research, please contact Sara Thompson at sethomp@colostate.edu or her advisor Linda Kuk at Linda.Kuk@colostate.edu. If you have any questions about your rights as a volunteer in this research, contact CMC IRB AT IRB_Researcher@cmc.edu or the CSU IRB at: RICO_IRB@mail.colostate.edu; 970-491-1553.

Sara Thompson

Appendix C continued – Institution B reminder e-mail to section B

You are being invited to participate in a research study, which the Claremont McKenna College Institutional Review Board (IRB) has reviewed and approved for conduct by the investigators named here. This form is designed to provide you - as a human subject – with information about this study. The Investigator or his/her representative will describe this study to you and answer any of your questions. You are entitled to a copy of this form. If you have any questions or complaints about the informed consent process of this research study or your rights as a subject, please contact the IRB at the Claremont McKenna College Office of Institutional Research at (909) 607-8395 or IRB@cmc.edu. Also see www.cmc.edu/IRB for more information on research involving human subjects.

Project Title: Factors that influence leader identity development in college students
Principal Investigator: Sara Thompson

Dear Participant,

I would like to remind you to take an online survey. Participation will take approximately 30 *minutes*.

My name is Sara Thompson and I am a researcher from Colorado State University in the Higher Education Leadership department. I am conducting a research study on the factors that predict a student's leader identity.

Your participation in this research is voluntary. Course credit will be given for your participation. If you decide to participate in the study, you may withdraw your consent and stop participation at any time without penalty. The alternative to participating in this study is to summarize the methodology and findings of a published research article on psychological research. Lastly, as your instructor for LEAD 10, your choice of how to participate in this study will not influence your grade in anyway.

The unique identifiers collected in this study will only be used to provide course credit. Then, they will be removed from the dataset. When I report and share the data to others, I will combine the data from all participants. I will keep your data confidential. While there are no direct benefits to you, I hope to gain more knowledge on the underlying factors that influence college student leader identity development. Students who participate will be entered into a drawing for one of ten \$25 Amazon gift cards.

There are no known risks to participating in this study. It is not possible to identify all potential risks in research procedures, but the researcher has taken reasonable safeguards to minimize any known and potential (but unknown) risks.

To indicate your willingness to participate in this research and to continue on to the survey, click here: https://claremontmckenna.co1.qualtrics.com/SE/?SID=SV_djzQMifLfXA9pVX.

If you have any questions about the research, please contact Sara Thompson at sethomp@colostate.edu or her advisor Linda Kuk at Linda.Kuk@colostate.edu. If you have any questions about your rights as a volunteer in this research, contact CMC IRB AT IRB_Researcher@cmc.edu or the CSU IRB at: RICRO_IRB@mail.colostate.edu; 970-491-1553.

Sara Thompson

APPENDIX D

Handouts to the Comparison Group at Institution B

You are being invited to participate in a research study, which the Claremont McKenna College Institutional Review Board (IRB) has reviewed and approved for conduct by the investigators named here. This form is designed to provide you - as a human subject – with information about this study. The Investigator or his/her representative will describe this study to you and answer any of your questions. You are entitled to a copy of this form. If you have any questions or complaints about the informed consent process of this research study or your rights as a subject, please contact the IRB at the Claremont McKenna College Office of Institutional Research at (909) 607-8395 or IRB@cmc.edu. Also see www.cmc.edu/IRB for more information on research involving human subjects.

Project Title: Factors that influence leader identity development in college students

Principal Investigator: Sara Thompson

Dear Participant,

My name is Sara Thompson and I am a researcher from Colorado State University in the Higher Education Leadership department. We are conducting a research study on the factors that predict a student's leader identity.

I am asking you to take an online survey. Participation will take approximately 30 minutes. Your participation in this research is voluntary. Course credit will be given for your participation - 1/2 credit hour will be given for the first survey and another 1/2 credit hour will be given for the second survey (but you have to do the first one to receive credit for the second one). If you decide to participate in the study, you may withdraw your consent and stop participation at any time without penalty.

The personal identifiers collected in this study will only be used to provide course credit. Then, they will be removed from the dataset. When I report the data to others, I will combine the data from all participants. I will keep your individual data confidential. While there are no direct benefits to you, I hope to gain more knowledge on the underlying factors that influence college student leader identity development.

There are no known risks to participating in this study. It is not possible to identify all potential risks in research procedures, but the researcher has taken reasonable safeguards to minimize any known and potential (but unknown) risks.

To indicate your willingness to participate in this research and to continue on to the survey, click here: https://claremontmckenna.co1.qualtrics.com/SE/?SID=SV_6VI0oq6w8grHQgZ

If you have any questions about the research, please contact Sara Thompson at sethomp@colostate.edu or her advisor Linda Kuk at Linda.Kuk@colostate.edu.

If you have any questions about your rights as a volunteer in this research, contact CMC IRB AT IRB_Researcher@cmc.edu or the CSU IRB at: RICRO_IRB@mail.colostate.edu; 970-491-1553.

Sara Thompson

APPENDIX E

Survey Instrument

Demographic and Experience Questions:

1. What is your name?
2. What is your email address?
3. What is your academic standing?
 - a. Freshman (first year)
 - b. Sophomore (second year)
 - c. Junior (third year)
 - d. Senior (fourth year)
4. Do you identify as the following:
 - a. Female
 - b. Male
 - c. Other (please specify)_____.
5. Please identify your academic institution:
 - a. University of Illinois at Urbana-Champaign
 - i. Are you enrolled in the Leadership Studies Minor? Yes or No.
 - b. Claremont McKenna College
 - i. Are you taking Organizational Psychology?
 - ii. Are you taking LEAD 10?
 - iii. If yes, which section of Lead 10 are you taking at Claremont McKenna College?
 1. Section A – Ron Riggio as professor
 2. Section B – Sara Thompson as instructor
 - iv. Are you enrolled in the Leadership Studies sequence? Yes or No.
6. POST TEST ONLY QUESTION. Please indicate how many hours (on average) per week you participated in the following activities during the past semester.
 - a. Clubs _____.
 - b. Sports teams _____.
 - c. Church/religious groups _____.
 - d. Community Service_____.
 - e. Employment_____.
 - f. Internship_____.

Directions – When thinking about your identity as a leader, respond to the following 7 items by indicating the degree to which you agree with each statement.

1	2	3	4	5
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

1. I see myself as a leader.
2. Being a leader is important to who I am.
3. Being a leader is a central part of who I am.
4. I am a typical leader.
5. I am exemplary of other leaders.
6. I identify with other leaders.
7. I enjoy being a leader.

Directions – Respond to the following 27 statements that indicate an attitude or behavior related to leadership that may or may not be characteristic or descriptive of you. Read each statement carefully and indicate the degree to which you agree with each statement.

1	2	3	4	5
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

1. Most of the time, I prefer being a leader rather than a follower when working in a group.
2. I am the type of person who is not interested to lead others.
3. I am only interested to lead a group if there are clear advantages for me.
4. I will never agree to lead if I cannot see any benefits from accepting that role.
5. I am definitely not a leader by nature.
6. I feel that I have a duty to lead others if I am asked.
7. I agree to lead whenever I am asked or nominated by the other members.
8. I am the type of person who likes to be in charge of others.
9. I have more of my own problems to worry about than to be concerned about the rest of the group.
10. I would never agree to lead just because others voted for me.
11. Leading others is really more of a dirty job rather than an honorable one.
12. I believe I can contribute more to a group if I am a follower rather than a leader.
13. I was taught to believe in the value of leading others.
14. It is appropriate for people to accept leadership roles or positions when they are asked.
15. I usually want to be the leader in the groups that I work in.
16. I am the type who would actively support a leader but prefers not to be appointed as leader.
17. I have a tendency to take charge in most groups or teams that I work in.
18. I would only agree to be a group leader if I know I can benefit from that role.
19. I would agree to lead others even if there are no special rewards or benefits with that role.
20. I would want to know “what’s in it for me” if I am going to agree to lead a group.
21. I am seldom reluctant to be the leader of a group.
22. I have been taught that I should always volunteer to lead others if I can.
23. It is not right to decline leadership roles.
24. It is an honor and privilege to be asked to lead.
25. I never expect to get more privileges if I agree to lead a group.
26. If I agree to lead a group, I would never expect any advantages or special benefits.
27. People should volunteer to lead rather than wait for others to ask or vote for them.

Directions – When thinking about your perspectives on leadership in organizations, respond to the following 27 items by indicating the degree to which you agree with each statement.

1	2	3	4	5
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

1. Individuals need to take initiative to help their organization accomplish its goals.
2. Leadership should encourage innovation.
3. A leader must maintain tight comparison of the organization.
4. Everyone in an organization needs to be responsible for accomplishing organizational goals.
5. Leadership processes involve the participation of all organization members.
6. A leader must comparison the group or organization.
7. A leader should maintain complete authority.
8. A leader should take charge of the group.
9. Organizational actions should improve life for future generations.
10. The main task of a leader is to make the important decisions for an organization.
11. Leadership activities should foster discussions about the future.
12. Effective leadership seeks out resources needed to adapt to a changing world.
13. The main tasks of a leader are to make and then communicate decisions.
14. An effective organization develops its human resources.
15. It is important that a single leader emerges in a group.
16. Members should be completely loyal to the designated leaders of an organization.
17. The most important members of an organization are its leaders.
18. Anticipating the future is one of the most important roles of leadership processes.
19. Good leadership requires that ethical issues have high priority.
20. Successful organizations make continuous learning their highest priority.
21. Positional leaders deserve credit for the success of an organization.
22. The responsibility for taking risks lies with the leaders of an organization.
23. Environmental preservation should be a core value of every organization.
24. Organizations must be ready to adapt to changes that occur outside the organization.
25. When an organization is in danger of failure, new leaders are needed to fix its problems.
26. An organization needs flexibility in order to adapt to a rapidly changing world.
27. Leaders are responsible for the security of organization members.
28. An organization should try to remain as stable as possible.

Directions - Respond to the following 8 statements that indicate an attitude or behavior related to leadership that may or may not be characteristic or descriptive of you. Read each statement carefully and indicate the degree to which you agree with each statement.

1	2	3	4	5
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

1. I feel that I know a lot more than most leaders about what it takes to be a good leader.
2. I know what it takes to make a work group accomplish its task.
3. In general, I am very good at leading a group of my peers.
4. I am confident of my ability to influence a work group that I lead.
5. I know what it takes to keep a work group running smoothly.
6. I know how to encourage good work group performance.
7. I feel comfortable allowing most group members to contribute to the task when I am leading a work group.
8. Overall, I believe that I can lead a work group successfully.

Directions - When thinking about your leadership development, respond by indicating the number corresponding to the extent to which you disagree or agree with the statement using the scale below.

1	2	3	4	5
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

1. I am confident that I can achieve the levels of leadership ability that I aspire to.
2. Great leaders are born and cannot be developed.
3. I am certain I can perform new leadership approaches well.
4. I do not perform new leadership tasks as well as I would like.
5. I believe that, with training, I can develop into an exemplary leader.
6. I believe that I could become an exemplary leader.
7. I am able to learn new leadership approaches quickly.
8. Great leaders develop over time through training and experience.
9. I am confident that I will benefit from the leadership development I receive in college.
10. I mastered new leadership approaches on a regular basis during my high school career.
11. It's impossible to become a better leader.