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Leadership Developmental Readiness : Furthering Our Understanding of This Multi-Dimensional Construct

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ABSTRACT

Although Leader Developmental Readiness (LDR) has been discussed in the leadership literature for over a decade, there has been little consensus on what factors constitute whether one is ready to develop as a leader. The purpose of our research was to consolidate and provide a cohesive model of the motivational components of LDR that encompasses the existing body of research. We used a longitudinal database containing 328 first semester freshmen students from five universities involved in leadership development programs to assess how the proposed LDR factors cluster and the antecedents of these factors. Our model suggests LDR as constituting a general readiness to learn, having a leader possible self (LPS), high leadership self-efficacy (LSE), and a motivation to lead. A hierarchical cluster analysis was conducted to explore how first semester college students participating in a leadership development program group cluster based upon their aforementioned components of LDR. The cluster analysis yielded two distinct groups of individuals which were entitled Mature LDR and Emerging LDR. The Mature LDR cluster was associated with higher general readiness to learn, LPS, LSE, and motivation to lead than the Emerging LDR cluster. Antecedents to these clusters were examined and it was determined that environmental support factors such as coming from higher social-economic status, having greater previous leadership experience, having a peer role model, and being more engaged in high school were found to predict being grouped into the Mature LDR cluster. Students entering a leadership development program during their first year in college with a high LDR were more likely to participate in leadership development experiences during their sophomore and junior year than those students entering with a low LDR.

Keywords: leadership, learning, developmental readiness, student involvement, higher education

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LEADERSHIP DEVELOPMENTAL READINESS: FURTHERING OUR UNDERSTANDING OF THIS MULTI-DIMENSIONAL CONSTRUCT

by

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INTRODUCTION

Organizations and universities pour time and resources into leadership development programs, however, research indicates varying success in the return on investment (ROI) of these programs (Avolio & Hannah, 2009). One of the reasons that these programs fail to maximize their ROI is the preparedness of the leaders to develop (Reichard & Walker, 2016). One of the most malleable elements of preparing for leadership development is eliciting motivation to develop leadership and providing a supportive environment that will optimize one's ability to develop.

Leader developmental readiness (LDR) was introduced over a decade ago yet conceptual definitions have only recently been explored (Avolio, 2004; Reichard, 2006) and little research has been conducted to determine the components of LDR, its antecedents, and its consequences. The purpose of this exploratory research is to gain a better understanding of what constitutes the motivational portion of LDR and determine what causes this portion of LDR to develop.

Leader Developmental Readiness

Two definitions of LDR have emerged. Day, Harrison, and Halpin (2009) define LDR in the terms of readiness of leadership experience and focus on how prepared an individual is to benefit and learn from a developmental experience. Hannah and Lester (2009) define LDR as "the ability and motivation to attend to, make meaning of, and appropriate new knowledge into one's long-term memory structures." Hannah and Avolio (2008; 2009) describe the construct as being multidimensional, consisting of two higher order constructs. Their definition includes an individual's *motivation to develop* and *ability to develop*. Motivation to develop includes leader interests and goals, having a

learning goal orientation (LGO), and leader developmental efficacy. Ability to develop as a leader includes self-awareness, self-complexity, and metacognitive ability (Hannah & Avolio, 2010). Finally, to maximize leadership developmental readiness, there must be a supportive environment (Reichard & Walker, 2016).

Reichard and Walker (2016) tied these theories into a conceptual linear model of LDR. This model utilizes the higher order constructs described by Hannah and Avolio (2008, 2009*): motivation to develop* and *ability to develop*. The motivation portion of LDR includes holding a leadership identity (e.g.., "I am a leader"), motivation to lead, leadership self-efficacy (LSE), and LGO. However, a caveat is that the individual must have the ability to develop. Metacognitive ability and self-awareness interact with motivational goals to impact the actual effectiveness of leader development efforts (Reichard & Walker, 2016). Furthermore, the availability of environmental supports helps inspire and facilitate leadership growth.

This paper examines the aspects of LDR that comprise an individual's motivation to develop. Based upon the existing body of research, we have conceptualized the motivational elements of LDR into having a general readiness to learn (learning goal-orientation (Culbertson & Jackson, 2016), the ability to self-regulate (Church & Rotolo, 2010), and resilience (Reichard & Walker, 2016)), holding a leader possible self (LPS, Avolio & Vogelgesang, 2011; Sessa et al., 2017), having motivation to lead (Chan & Drasgow, 2001), having LSE (Reichard, et al., 2017). Motivation to develop is important to look at from a leader development perspective due the fact that it is more easily manipulated and thus more developable than the ability components of LDR.

Motivational Components of LDR

General Readiness to Learn. Readiness to learn is a construct frequently researched in educational psychology, especially in young students first entering learning environments (Rubenson, 1998; Coolhan, Fantuzzo, Mendez, & McDermott, 2000; Thomas, 2006; Janus & Duku, 2007). Some studies focus on readiness to learn as the cognitive (e.g. concrete subject matter knowledge) and non-cognitive (e.g. autonomy, adaptability, comfort in educational environment) skills involved in the process of learning, both prior to and during learning episodes (Rubenson, 1998; Janus & Duku, 2007). Other studies focus on motivational variables such as openness to learning, persistence, and self-regulation in addition to the previously discussed factors (Coolahan et al., 2000; Thomas, 2006). For the purpose of this study, the latter definition of readiness to learn will be used. We define general readiness as having the desire to learn (LGO), the ability to direct and monitor motivational effort (self-regulation), and persevere adversity (resilience).

Learning Goal-Orientation. An individual's goal-orientation (GO) will impact the type of goals they will set (VandeWalle, Cron, & Slocum, 2001). It is important to understand how goals are approached and set when accelerating leader developmental (Hannah & Avolio, 2010). Goal-orientation is defined as a conceptualized mental framework for how individuals interpret and respond to achievement situations (Brett & VandeWalle, 1999). Individuals can set goals with the intention of learning and developing (LGO), or with the intention of demonstrating one's ability level (prove goal-orientation) or avoiding appearing incompetent (performance-avoid goal-orientation). Leaders with a strong LGO will set more challenging developmental goals than leaders

with a performance goal orientation and these more challenging developmental goals should then lead to greater levels of LDR (Culbertson & Jackson, 2016). In addition, individuals with a LGO set goals related to learning and developing, which sets the stage for LDR. LGO leaders utilize and accept constructive feedback through self-regulatory processes more so than individuals with PGO. Individuals who seek feedback more set personal developmental goals based upon the feedback they receive (Payne et al., 2007). This manifests in a propensity to continuously self-develop leadership even once desirable levels of performance are achieved. Ultimately, GO is germane to LDR because of how an individual's GO effects their general readiness to learn and ultimately their continued development as a leader (Culbertson & Jackson, 2016).

Self-regulation. A second factor that influences readiness to learn is self-regulation. Self-regulation includes the ability to develop, implement, and flexibly maintain planned behavior in order to achieve ones' goals (Kanfer, 1970). For someone to make a deliberate effort to learn, they must develop a goal to learn. Self-regulated learners create a pathway to learning by establishing clear and realistic goals, using strategies, self-monitoring, and evaluating their progress (Zimmerman, 2000). Self-regulation initially develops from social sources (Schunk & Zimmerman, 1997). This may include learning from having an adult mentor, peer role model, or pursuing social activities. Novice learners acquire learning strategies most rapidly from teaching, social modeling, task structuring, and encouragement (Zimmerman & Rosenthal, 1974). Support from social influences does not disappear with advancing skill acquisition and there is continued reliance on supportive environmental sources (Zimmerman, 2000).

Zimmerman (2000) presents self-regulation as a dynamic cyclic process beginning with a forethought phase where goal-setting and strategic planning interact with motivational beliefs such as self-efficacy, expectations, intrinsic motivations, and learning goal orientations to prepare a person for self-regulatory performance (Nesbit, 2004). Zimmerman's three-phase self-regulation model includes a forethought phase that precedes actual performance (in this case leadership development). The forethought phase refers to processes that set the stage for leadership performance (LDR). The performance (volitional) control phase involves processes that occur during learning and affect attention and action (Schunk & Zimmerman, 2003). During the self-reflection phase that occurs following the performance, people reflect upon their efforts before continuing the self-regulation cycle. Learners who are highly capable of self-regulating are more likely to attribute poor performances to strategy deficiency than are poorly self-regulated individuals (Kitsantas, 2002). Identifying that one is not at his or her desired level results in identification of development needs. This directs attention to the nature of development strategies and contributes to motivation to engage with development actions (Kanfer, 2005). Learners monitor their process towards their goal and if progress is not made or the plan is proving to be deficient in some manner, they modify their behavior. This attribution may make self-regulators more likely to be resilient when their first leadership attempts are less than successful. Models of leadership development suggest that self-regulation is an essential component of self-directed leadership development (Avolio & Gardner, 2005; Nesbit, 2012).

Resilience. The third factor that influences readiness to learn is resilience. The resilience construct has been studied across many disciplines including business and

industrial organizational psychology (Bargavi, Annad & Paul, 2017; Britt et al., 2016; Shek & Lung, 2016; Wang, Li & Li, 2017), family counseling (Walsh, 2002) and child development (Luthar, Cicchetti & Becker, 2000). Meredith et al. (2011) reviewed the resilience literature and found 104 definitions of resilience. A theme that emerged is that resilient individual has the ability to "bounce back" when faced with misfortune or adversity. The resilience construct, although it has biological roots, is not an entirely inherent trait and can be developed in an individual. Resilience does not come from extraordinary qualities, but largely from the everyday social supportive resources available to individuals (Matsen, 2001). We define resilience as the process of, capacity for, or outcome of successful adaptation despite challenging or threatening circumstances (Coleman & Hagell 2007; Masten, 2001; Werner, 2000) that leads to positive growth within the individual (Britt et al., 2016).

Stoltz (2004) asserts that "resilient individuals, teams, and organizations consistently outlast, outmaneuver, and outperform their less resilient competitors – making resilience training one of the most important emerging trends in learning". Individual factors (e.g. healthy attribution style, hope) or dispositional attributes (e.g. emotional stability, openness, and agreeableness), relational factors (e.g. social support, supportive family environment), and community factors (e.g. good school or community assets) help foster resilience (Shek & Leung, 2016). Anecdotes from resilient pathway analyses have shown that opportunities at critical moments in someone's life play an important role in the life course of individuals who find mentors (Cairns & Cairns, 1994; Werner & Smith, 1982). One of those critical opportunities is developing leadership skills in college. Having a supportive environment such as a mentor can aid and encourage

resilience in students attempting to develop leadership skills. Limited empirical evidence connecting resilience and leadership exists although a relationship was been demonstrated in millennial leaders (Bargavi, Annad & Paul, 2017).

Both researchers of leadership and positive psychology (Luthans, Luthans & Luthans, 2004) suggest it be included in the LDR model. Seligman (2002) offered that the root underlying all positive aspects of leadership should extensively be studied in order to develop leadership and resilience strategies for challenging and turbulent times. Specific to leadership development in college, university life itself is stressful and requires students to persevere in curricular and co-curricular spheres to overcome challenges while maintaining effort and engagement. Adjustment and academic success at university require high levels of resilience (Munro & Pooley, 2009), although research on resilience and university life is limited. Luthans & Avolio (2003) advocated that the ability to be resilient is a core component of leadership development and that resilience is needed to persist towards developmental goals (Reichard & Walker, 2016).

Our study conceptualizes GRL based upon the motivational variables such as openness to learning, self-regulation, and resilience (Coolahan et al., 2000; Thomas, 2006). Next we explore leader possible selves, leadership self-efficacy, and motivation to lead which are the three main motivational constructs that constitute leadership specific readiness.

Leader Possible Selves. Individuals can hold multiple, distinct identities that include relatively stable and unchanging aspects of the self (actual self-concept), as well as contextually specific aspects of the self (possible self-concept) (Markus & Wurf, 1987). While the a*ctual self* refers to a person's representation of who they already are,

possible self represents individuals' ideas of what they might become, what they would like to become, and what they are afraid of becoming (Markus & Nurius, 1986). Possible selves can be viewed as cognitive manifestations of enduring goals, motives, and fears, and are powerful incentives that motivate action in the pursuit and acquisition of those goals (Oyserman, Bybee, & Terry, 2006). Self-discrepancy theory describes the discrepancy between actual self and possible self provides direction and impetus for action, change, and development towards becoming that possible self (Higgins, 1987). Self-regulatory theories suggest the ways in which individuals' possible selves may direct and motivate behavior (Lord, Diefendorff, Schmidt, & Hall, 2010). One domain in which a possible self can emerge is leadership (Avolio & Vogelgesang, 2011). Components of a LPS might include the ability to see oneself as a leader (referred to as availability, Norman & Aron, 2002), the desire (or not) to be a leader (referred to as accessibility, Norman & Aron, 2002), the belief that one can become a leader (referred to as perceived control, Norman & Aron, 2002), and the choice of the type of leader to be. Additional components of a LPS might include genetic, situational, and psychosocial developmental factors (Sessa et al., 2017).

In order to sustain long-term interest and motivation for developing and eventually practicing leadership, a leadership role must become part of one's *actual self*-identity (Lord & Hall, 2005); a leader's possible self in a domain is a precursor to their actual identity. The more salient and central an identity, the more likely a person will intentionally seek out opportunities to engage in activities, groups, situations, and relationships that align with that identity (Santee & Jackson, 1979). This suggests that individuals with a strong and integrated leader possible self would be more motivated and

ready to engage in leader development and to exercise leadership than individuals not holding such an identity, or those whose leader identity is less important to them (Priest & Middleton, 2016).

Leader Self-Efficacy. LSE refers to an individual's belief that they can take on and function in a leadership role (Avolio & Vogelgesang, 2011; Schunk, 1989). This stems from Bandura's conceptualization of self-efficacy (1986, 1995, 1997), which is defines the construct as deriving from greater self-awareness though an individual's processing mastery experiences, vicarious learning, social persuasion, and intense psychological states. Human functioning involves reciprocal interactions between behaviors, environmental variables, and cognitions and other personal factors (Bandura, 1986). In terms of LSE, a leader's own internal self-confidence level can determine whether he or she accepts or strives for formal and informal leadership positions and performs well as a leader (Kirkpatrick & Locke, 1991; Machida & Schaubroeck, 2011). LSE influences LDR through willingness to engage in and commit to roles and experiences that will self-develop leadership above and beyond one's previous leadership development level (Hannah et. al., 2008; Reichard et al., 2017). Furthermore, LSE plays an important role in determining whether or not individuals are motivated to become leaders and eventually persist as a leader (Anderson et al., 2008: Hannah et al., 2008).

Motivation to Lead. The desire to lead others is a key motivational factor that has demonstrated an effect on leadership outcomes (Chan & Drasgow, 2001; Hendricks & Payne, 2007). An individual's MTL includes developmental and performance factors (Chan, 1999). The developmental aspects of MTL articulates that some individuals seek out growth/training opportunities to be leaders, whereas the performance function states

that high levels of MTL will influence the level and longevity put forth when in a leadership position. Combing these two elements of MTL, Chan and Drasgow (2001) define the construct as a relatively stable paradigm that "affects a leader's or leader-to-be's decisions to assume leadership training, roles, and responsibilities and that affect his or her intensity of effort at leading and persistence as a leader". This occurs along three dimensions described as *Affective Identity (AI) MTL, Social Normative (SN) MTL,* and *Non-Calculative (NC) MTL*. *Affective Identity MTL,* essentially refers to individuals who generally get enjoyment out of leading others and therefore are motivated to take on leadership roles. *Social Normative MTL* describes individuals who take on leadership roles because they feel a sense of duty or responsibility to lead. Finally, some are motived to lead because they do not calculate the responsibilities or costs of leadership and are less likely to avoid leadership; *Non-Calculative MTL*. Specifically for student leaders, the more they are motivated, the more they engage and display interests in the task at hand (Bardou et. al., 2003; Pintrich & Schunk, 1995). In the context of LDR, students who are more motivated to lead might be more engaged and motivated to develop leadership skills.

In this paper, we explore whether and how the motivational components of LDR relate to one another. In the literature, it is assumed that all of the motivational components need to be high for a person to be ready to develop their leadership. We were curious to determine if there might be different profiles.

Research Question 1. Will different profiles of LDR emerge in first semester college students entering a leadership development program?

The leadership specific motivational components of LDR include holding a leader possible self, having a leadership self-efficacy, and have the motivation to lead others. These constructs, although related to one another, account for conceptually distinct facets of LDR. Students who demonstrate the greatest amount of these motivational components should therefore be the most ready to develop as a leader. In the next section, potential antecedents to LDR will be explored.

Antecedents: LDR environment

In this study, we examine 4 antecedents to LDR. 1) Demographics of high school GPA, race and gender 2) Triggering event (Reichard & Walker, 2016) 3) Previous experience as a leader 4) Supportive environment (Reichard & Walker, 2016).

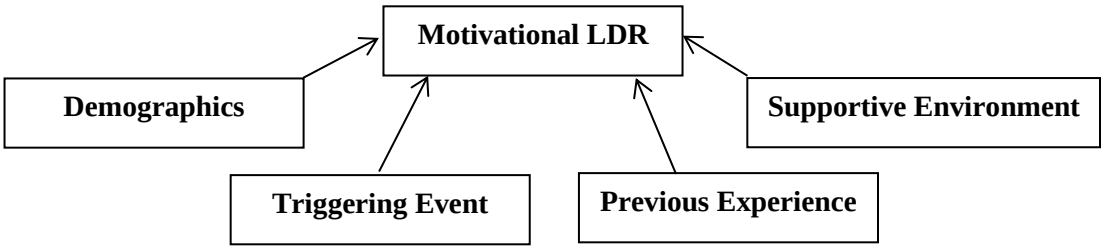

Figure 1. Antecedents to motivational leadership developmental readiness.

Demographics. Previous research has demonstrated a relationship between SAT scores and general cognitive ability (Frey & Detterman, 2004). However, multiple universities in this study do not collect SAT scores as a criterion for admission. In this study, we include academic achievement (GPA) as a proxy for intelligence as research demonstrates that performance on intelligence tests is correlated with school achievement (see Kranzler, Benson, & Floyd, 2015). Although GPA has demonstrated strong

correlations with other measures of cognitive ability, it is a somewhat contaminated measure of intelligence as it has been found to tap into motivation and conscientiousness (Ployhart & Holtz, 2008; Roth & Bobko, 2000). GPA is, therefore, a more conservative measure of intelligence. A body of empirical research has demonstrated an association between cognitive ability and leadership (Judge et al., 2004; Kickul & Neuman, 2000; Lord et al., 1986; Mumford et al., 2007). Specifically the relationship has been demonstrated at young ages, as intelligence has shown to predict leadership role occupancy across an individual's life (Daly & O'Reilly, 2015). Therefore, there may be a positive relationship between intelligence as measured by high school GPA and LDR.

The empirical research on how race relates to leadership and leadership development in college students is limited and contradictory in its findings (Dugan, 2011). Three qualitative studies determined that race had an impact on student perceptions of leadership and leadership development (Arminio et al., 2000; Komives, Owen, Longerbeam, Mainella, & Osteen, 2005; Renn & Ozaki, 2010). However, most quantitative studies have found that race has little or a nonsignificant amount of influence on leadership (Cress, Astin, Zimmerman–Oster, & Burkhardt, 2001; Dugan & Komives, 2010; Posner, 2004). In a large quantitative study, Dugan, Kodama & Gebhardt, 2012 used collective racial esteem to explore racial influence on leadership development found different predictors of leadership development by racial group. This research will examine if there are any racial differences on LDR.

More recent definitions of leadership, which include aspects of stereotypically feminine characteristics (e.g. relationship building), may help understand a long history of contradictory research findings (Eagly & Johnson, 1990; Dugan, 2006). Dugan,

Komives, & Segar (2008) found that women scored consistently lower on leadership measures than males in a study focusing on socially responsible leadership. Another study on the same topic found that females scored consistently higher than males (Dugan, 2006). These researchers also state that the majority of previous leadership literature has designed, used, and validated measures specific to organizations rather than college students which may explain contradictory evidence in the college student population. Guided by previous research, we hypothesize that there will be gender differences on LDR.

Hypothesis 1a. Students with a higher high school GPA will have a higher LDR.

Hypothesis 1b. There will be racial differences on LDR.

Hypothesis 1c. There will be gender differences on LDR.

Triggering Event. Another factor influencing LDR is having a triggering event or critical incident that inspires leadership readiness. Triggering events (also referred to as turning points, epiphanies, defining moments, or crucibles) are points of disequilibrium and heightened self-awareness that can lead the individual to challenge his or her basic beliefs and assumptions (Avolio & Luthans, 2006, pp. 335) and may include unexpected opportunities, challenges, or losses. Triggering events related to leadership may challenge an individual's assumptions about him or herself as a leader thus leading to participation in leadership development or taking on a leadership role. They have been linked to leader identity development (Toor & Ofori, 2008) and to leader development (Shamir & Eilam, 2005). Triggering events related to leadership may challenge an individual's assumptions about him or herself as a leader thus leading to participation in leadership development. The discovery or development of a leadership passion or

purpose is used as the first component of the leadership model and therefore, might be an antecedent to motivational LDR (Reichard & Walker, 2016). Without the discovery of a passion or purpose for leadership, individuals may be left wondering why they should bother enacting leadership and have a low motivation to take on a leadership role or develop their leadership skills. Finding an inspiring event or triggering event can stimulate a change in thinking and, therefore, serve as a motivational catalyst for leadership development and taking on a leadership identity (Reichard & Walker, 2016).

Hypothesis 2. Students with a triggering event will have higher LDR.

Previous Experience. Previous experience is defined as having taken a leadership role in high school for a sizable duration of time relative to one's peers. In all human behavior, one of the best predictors of future performance is past performance. Having previous leadership experience has obvious developmental benefits through experiential learning. Experience plays an essential role in human learning and development (Kolb, 2014). In fact, one of the primary sources of learning to lead is through experience (McCall, 2004). Action learning theorists (e.g., Revans, 1980) note that experiential learning is a potent source of development. It can, therefore, be expected that individuals who have had the developmental opportunity to practice leadership skills in high school will be more developmentally ready for leadership entering college. Rather than learning leadership skills as it is understood by others, students make sense of their own experiences, and in turn discover and cultivate leadership in themselves (Antonacopoulou & Bento, 2004). College student precollege leadership capacity, knowledge, and success regularly emerge as significant predictors of taking on leader positional roles in college and beyond (Arvey, et al., 2007; Dugan, et al.,

2008; Dugan & Komives, 2006). In addition, the more past leadership experience an individual has, the more likely they are to take on a leadership identity (Sessa et al., 2017). A stronger leadership identity inspires more motivation to lead and the more someone is motivated to lead, the more driven they will be to develop as a leader (Reichard & Walker, 2017). Hirst et al., 2004 also found support for their hypotheses that a leader's level of experience will determine how much he or she will learn and, further, experience will moderate the relationship between leadership learning and facilitative leadership development. Less experienced leaders simply have more to learn and the schemas of inexperienced leaders are likely to be less complex or crystallized, and thus are more amenable to change. Catch up growth is a feasible outcome for students who have not had the same amount of previous leadership experience through participating in leadership development programs and practicing leadership in high school. However, we posit that students who had previous leadership experience will have greater LDR entering college.

Hypothesis 3. Students with past leadership experience in high school will have a higher LDR in college.

Supportive Environment. Support for development is another component of LDR. When motivation and ability to develop interact, their multiplicative efforts maximize the success of a leadership development when the surrounding environment is highly supportive of that process (Reichard & Walker, 2016). This may be fostered with having higher social economic status, having an adult mentor, or a peer role model (Komives, Owen, Longerbeam, Mainella, & Osteen, 2005; Reichard & Walker, 2017; Sessa et al., 2017; Soria, Hussein, & Vue, 2014). Individuals with a highly supportive

environment, should, therefore, have a more developed leader readiness than individuals coming from an environment that is not rich with supportive factors. An individual's environmental support factors may serve as a catalyst for development through increases in leadership self-efficacy, seeing oneself as a potential leader, motivating leadership intentions or encouraging a readiness to learn leadership. It may also provide the needed sustenance when an individual is attempting to develop themselves as a leader.

Social Economic Status. One of the earliest and most longitudinally influential environmental influences is the home environment one was raised in. A body of research supports the notion that childrearing practices significantly influence children's early socialization, development and adolescent life. Parents are seen as baring responsibility for nurturing their children and carefully grooming them into functioning adults that contribute to society (Maccoby, 2000). Among factors related to parenting and child-rearing, socioeconomic status (SES) generates much attention. Parents of high SES are able to provide their children with a wider range of experiences, material resources, and social interactions that many low SES families do not have access to, resulting in differential outcomes for children (Bradley & Corwyn, 2002). For example, studies have established a link between parent's SES and child rearing practices (Yunus & Dahlin, 2013) and between SES and educational outcomes of children (Kan & Tsai, 2005; Yunus & Dhalan, 2013). In traditional college aged students, SES is associated with expectations for oneself in a future job (Pisarik & Shoffner, 2009) and the likelihood of participating in positional leadership positions while in college (Soria, Hussein, & Vue, 2014). Additionally, communities with higher SES have a wider range of social and developmental support available as a resource for development. This may increase the

opportunity for leadership experiences or provide a greater opportunity positive community mentors or role models. This suggests that family SES may influence the environment and opportunities that individuals are exposed to, which in turn could influence the LDR of college students.

Hypothesis 4a. Students from a higher SES will have a higher LDR.

Adult Mentor. Mentoring is defined as the matching of a novice with a more experienced person in the same role (Reiss, 2007). Mentoring can be useful in enhancing the development of mentees (Tracey & Nicholl, 2007) through a complex relationship based upon a social exchange between at least two individuals (Boyer, 2003). Mentors help their mentees become more comfortable with their role as a leader (Reiss, 2007). Mentorship is "assumed to foster teamwork, motivation, and help increase competency levels of mentees when incorporated into leadership development programs and organizational systems" (Messmer, 2003; Solanksy, 2010). During the highly influential years of a developing leader's life, future leaders develop leadership experience through direct experience such as extracurricular activities (sports team, clubs, community service) and through observing influential adults (Murphy & Reichard, 2011). The identification of an adult role model during this critical time period can inspire leadership action and can aid in LDR by praising effort and progress, which instills a learning goal-orientation (Gunderson et al., 2016; Reichard & Walker, 2016). In one's college development, finding an adult mentor (faculty, administrator, member of the community) can motivate students to lead and encourage that their passion to do so by identifying and aiding opportunities for the student to lead and helping them for strategies for development that will enhance the developing leader's ability to plan, regulate, and

evaluate their own growth as a leader over time (Reichard & Walker, 2016). The literature on mentor leader relationships suggests that participating in a mentoring relationship is a powerful predictor of leadership gains (Astin, 1993; Campbell & Dugan, 2012, Dugan & Komives, 2010; Kezar & Moriarty, 2000; Komives et al., 2005, Parks 2000). Scholars have found explicit connections between mentoring and leadership through the recognition that the processes of modeling leadership behaviors impact mentee's actual capacities for leadership (Godshalk & Sosik, 2000; Popper & Lipshitz, 1993). This is achieved largely due to the nurturing and supportive environment fostered by the mentor (Scandura, Tejeda, Werther & Lankau, 1996). In fact, a national dataset representing more than 50 institutions and 50,000 respondents found that faculty mentoring was one of the most powerful predictors in leadership outcomes, although peer mentoring and student administrative mentoring demonstrated a positive effect on specific leadership outcomes (Dugan & Komives, 2010). The mentoring process and type of mentor in one's leadership capacity above and beyond what can be explained by institutional variables, precollege leadership outcomes, and demographic variables alone (Campbell & Dugan, 2012).

Peer Role Model. Given time constraints of adult mentors, research suggests that students frequently seek out types of mentors such as their peers (Kram & Isabella, 1985; Parks, 2000). Some research advocates that peer support may be even more important than supervisor support (Gegenfurtner et al., 2009). In a college setting, a student is not required to interact with faculty outside of the classroom and some students may feel hesitant to initiate or ask for a mentor relationship with someone with positional power. Also, college students have far more interactions with their peers on a regular basis than

they do with faculty, administrators, or other potential adult mentors. As a result, peers for many college students, account for a larger amount of a student's supportive environment. Peer influence may include students joining a friend or roommate to participate in leader development opportunities (university leadership programs) or for general advice or recommendations (Thompson & Reichard, 2016). Peer mentoring not only provides a supportive environment, but it also serves as an important developmental experience for the mentor and mentee, plays a role in student leader identity development (Komives, et al., 2005) and aids in leader competency development (Dugan & Komives, 2010). These studies suggest that mentors and role models may also influence the environment and opportunities that developing individuals are exposed to, which in turn could influence the emergence of a LPS in college students (Sessa et al., 2017). Ultimately whether it is adult or peer support, the developing leader's perception of support in the environment is what makes the impact (Gegenfurtner et al., 2009) and enables motivational LDR.

Hypothesis 4b. Students with an adult mentor will have greater LDR.

Hypothesis 4c. Students with a peer role model will have greater LDR.

High School Engagement. School engagement is defined as the student's psychological investment in and effort directed toward learning, understanding, or mastering the knowledge, skills, or crafts that academic work is intended to promote (Newmann, Wehlage, & Lamborn, 1992). Sessa (2017) found that experiences students encounter within various student organizations, and the people with whom they interact within those organizations, are powerful triggers for their leadership learning and development. However, most of the learning is tacit learning or learning how to engage in

leadership without being aware of what is being learned or that they are learning leadership. Engagement in high school is not limited to extracurricular participation. Students who are more engaged in school will also be more involved and attentive in the classroom, put a lot of energy into their schoolwork, become involved in school decision-making processes, and feel a sense of value and belonging to their high school. Simply put, students who are highly engaged in school will get more out of the opportunities a school offers them. This will help them develop in a number of areas including leadership. We posit that students who were more engaged in high school, even if they were not necessarily engaged in leadership, will have higher LDR in college.

Hypothesis 4d. Students with greater high school engagement will have a higher LDR.

As discussed, there are a number of antecedents that contribute to having a high motivational LDR. In this paper we explore the relationship these antecedents have with LDR and with one another. We expect that demographic variables will be the least predictive of LDR. Coming from a higher SES, having a triggering event, a mentor/role model, previous experience with leadership, and engagement in high school will all predict greater LDR. It will be expected that these antecedents will also have positive relationships with one another.

Consequences of Motivational LDR.

Students entering a first year college leadership development program with a higher LDR should be more likely to engage in college experiences both directly and indirectly related to leadership development. This may manifest by participating in co-curricular positions or becoming involved with a club on campus. Students with a high

LDR may take direction action to develop leadership skills by participating in leadership development activities in their subsequent college years through engaging in leadership course work or holding a leadership position on campus. Having a higher LDR indicates that the student have a stronger leadership identity, belief in their leadership capabilities, and a desire to take on a leadership position. It is therefore likely that freshmen students entering the leadership development program with a higher LDR will be more likely to participate in leadership positions in their consequent years of college than students entering the program with a lower LDR.

Hypothesis 5a: Students with a high LDR will be more likely to participate co-curricular positions during one's sophomore year of college.

Hypothesis 5b: Students with a high LDR will be more likely to participate in co-curricular positions during one's junior year of college.

Hypothesis 6a: Students with a high LDR will be more likely to participate in a club during one's sophomore year of college.

Hypothesis 6b: Students with a high LDR will be more likely to participate in a club during one's junior year of college.

Hypothesis 7a: Students with a high LDR will be more likely to participate in leadership development experiences during one's sophomore year of college.

Hypothesis 7b: Students with a high LDR will be more likely to participate in leadership development experiences during one's junior year of college.

Method

Participants. Researchers approached administrators in charge of freshman leader development programs to elicit participation from five schools offering a freshman

leadership development experience and both curricular and co-curricular leadership development programs. Those administrators reached out to students participating in the freshmen leadership development program to alert them to the study, describe it, and encourage their participation. A total of 328 participants were drawn from 1,820 first-semester students enrolled in leader development programs at five schools for a response rate of 18%. Three of the five programs are co-curricular and two are curricular programs. These institutions differed on a variety of characteristics such as size (four large, one small), Carnegie classification (one teaching, four research), and public/private (four public, one private). Students were traditionally aged freshman with 70% female, 49% Caucasian, 17% Asian, 16% Hispanic, 9% African-American, and 9% coming from another racial group or having multiple racial identities.

Procedures. A graduate student sent emails to interested students with a link to an online survey. Students received a $10 gift card for their participation in each survey (upon completing at least 90% of the survey).

Measures

General readiness to learn. General readiness to learn included 91 questions determined by measuring openness to learning VandeWall (1997), self-regulation Brown, Miller & Lawendowski (1999), and resilience (Wagnild, 1993). For this research, the measures were combined recoded into one general readiness to learn variable ($\alpha = .70$). Openness to learning was assessed using the goal orientation, a 13-item scale was developed by VandeWall (1997), the Likert scale was reduced from its original 7-point scale to 5-point scale, ranging from 1 = ‘strongly disagree’ to 5 = ‘strongly agree’. The instrument has three subscales: five items measured the learning goal orientation, four

items measured the 'prove' dimension of performance goal orientation, which is the desire to prove one's competence and gain favorable judgments. The last set of four items measure the 'avoid' dimension of performance goal orientation, which is the desire to avoid the disproving of one's competence and to avoid negative judgment (Brett & VandeWalle, 1999). This study utilized the learning goal-orientation component of the scale (α= .89).

Self-Regulation Questionnaire. The Self-regulation Questionnaire was developed by Brown, Miller & Lawendowski (1999) and is a 63-item scale to assess the self-regulatory processes to describe general principles of behavioral self-control. The Self-Regulation Questionnaire was developed as a first attempt to assess these self-regulatory processes through self-report since until this scale, it was not known whether people could reliably and accurately report their own self-regulatory capabilities (Brown, Miller & Lawendowski, 1999). Items were developed to mark each of the seven sub–processes of the Miller and Brown (1991) model (receiving, evaluating, triggering, searching, formulating, implementing and assessing), forming seven rationally-derived subscales of the SRQ. The overall scale had a Cronbach's alpha of .90).

Resilience Scale. The Resilience Scale is a 25-item scale using a 7-point rating (1–7) (Wagnild, 1993). The scale has two factors, personal competence and acceptance of self and life, which measure the construct of resilience (Ahern et al., 2006). Although originally tested with adult subjects, numerous studies have validated that the scale has worked well with samples of all ages and ethnic groups (Wagnild, 2009). For the purpose of this study, this scale was reduced from a 7-point to a 5-point scale, each item was

scored from 1 = 'strongly disagree' to 5 = 'strongly agree'. Internal consistency of the scale was (α = .88).

Leader possible self. A 10-item LPS scale (Sessa et al., 2017) was used to determine if students thought of leadership as something that they could develop and whether they wanted to develop it themselves. The measure includes five items that determine whether an individual sees leadership as something that is innate or that it can be developed over time. The items were "Leadership is something that a person possesses inside themselves, similar to the way one is born intelligent or wit;" "Only leaders do leadership;" "Leadership occurs when one or a few people in a group or community hold more power than others;" "Leaders have skills or characteristics that followers do not;" and "Under most circumstances, only one person can be the leader at a time (Reverse scored; (α = .69). This scale also included five items intended to measure an individual's goals in becoming a leader. These items were "My main goal professionally is to achieve a leadership position in my field of study;" "I have plans to develop myself as a leader during college to achieve my professional goals after college;" "I had planned to be in a leader position when I entered college;" "I do not see myself in charge of others in my future (negatively scored);" "I see myself continuously furthering or advancing in the development of my leadership throughout my life." (α = .76). Response categories for both included "Strongly disagree", "Disagree", "Neither disagree nor agree", "Agree", and "Strongly agree".

Leader self-efficacy. Leader self-reflectiveness is measured by LEQ. We measured leader self-efficacy using a 22-item scale adapted from Hannah & Avolio (2013) that looks at three components of leader efficacy, leader action self-efficacy,

leader self-regulation efficacy and leader means efficacy, as well as an overall score. Participants were asked to rate their own leader self-efficacy by indicating their level of confidence for each statement. Items were rated from "0," meaning the participant had no confidence in their ability, to "100," the participant has total confidence in their ability. A sample statement for leader action self-efficacy is "As a leader I can energize my followers to achieve their best". A sample statement for leader self-regulation is "As a leader I can determine what leadership style is needed in each situation". A sample statement for leadership means efficacy is "As a leader I can effectively lead working within the boundaries of the organization's policies". For the purposes of this research we looked at the overall scale score. Cronbach's alpha for the overall scale was .92.

Motivation to lead. The scale developed by Chan and Drasgow (2001) to measure the MTL construct describes three types of motivation to be a leader and was used to measure leader MTL. The original 27 item scale was reduced to 17 items; only items with factor loadings of over .60 were retained. The first section of this scale is designed to measure Affective-identity MTL for example, "Most of the time, I prefer being a leader rather than a follower when working in a group" ($\alpha = .82$). The next section is designed to measure Non-calculative MTL, for example, "I am only interested to lead a group if there are clear" ($\alpha = .72$). The last section is designed to measure Social-normative MTL, for example "I feel that I have a duty to lead others if I am asked" ($\alpha = .73$).

HS GPA. GPA was determined by asking students "What was your high school GPA?"

Ethnicity. Ethnicity was determined by asking students "What is your race?"

Gender. Gender was determined by asking students "What is your gender?"

Triggering event. Triggering event was measured by asking "Can you recall an incident or conversation that encouraged you to develop leadership skills?" Response categories were "Yes" and "No".

Social economic status. Social economic status was measured using a single item measuring student perception of SES: "How would you describe your family's financial situation?" Response categories included "Well below average", "Somewhat below average", "Above average", "Somewhat above average", and "Well above average".

Past leadership experience. Past leadership experience was assessed on the following: 1) experience in leader roles during high school, 2) duration in leadership situations in high school and 3) perception of overall leadership experience as compared to peers. Items were collapsed into one scale measuring students' overall past leadership experience ($\alpha = .78$).

Presence of a peer role model or adult mentor. These were measured with two questions asking whether students had adult and peer mentors or role models. Response categories for these questions were "Yes" and "No".

School engagement. The "Student Engagement and Family Culture Survey" was used and contains 70 items measuring student participation in school activities, student identification with school, and students' perceptions of their family educational culture (Leithwood & Jantzi, 2000). For the purpose of our study, this scale was condensed into 41 items measured by five subscales. The first subscale, "responding to requirements", was measured by 10 items such as "I always finish my schoolwork on time" ($\alpha = .81$).

"Class related initiative" contained 6 items such as "I put a lot of energy into my schoolwork" (α = .77). "Extracurricular participation" was measured by four items such as participating in school events (e.g. plays, athletics, musicals) is a very important part of my life at school (α = .83). "A sense of belonging" was measured by 10 items such as "I feel that I belong at this school" (α = .90). "Valuing" was measured by seven items such as "I think schoolwork is really important" (α = .76). "Student academic self-efficacy" was measured by four items such as "I am able to understand most of the material covered in my classes" (α = .81). The overall 41 item school engagement scale had a Cronbach's alpha of .93

Sophomore year participation in leadership. During the spring semester, students were asked a number of questions pertaining to their involvement in various programs, clubs, organizations and sports teams during their first two years of college. *Co-curricular participation* was measured by asking students what internships, work experiences, research assistantships they have participated in. *Club participation* was measured by asking students to indicate whether or not they participated in any of the clubs offered at each university. *Participating in leadership development experiences* was measured by dividing students into two groups: those who continued to participate in leadership development after the first-year leadership development program and those that did not. Students who hold, or have previously held, a leadership position were placed into the leadership development experience group. Leadership positions included elected roles in organizations such as president and vice president, along with the other roles that the university defines as leadership such as resident assistant, student ambassador, and office manager. Additionally, students who were participating in

leadership development specific programs or completing an academic leadership program were also placed in the leadership development experience group (N = 135). Students who did not participate in any of the above were placed in the discontinued leadership development post freshman year group (N = 71). Two graduate students coded responses and an interrater reliability of .87 was established.

Junior year participation in leadership. Junior year participation in leadership followed the same format as sophomore year. *Co-curricular participation* was measured by asking students what internships, work experiences, research assistantships they have participated in. *Club participation* was measured by asking students to indicate whether or not they participated in any of the clubs offered at each university. *Participating in leadership development experiences* was measured by dividing students into two groups: those who continued to participate in leadership development (N = 63) and those that did not (N = 34). Interrater reliability for junior year leadership participation was found to be .89.

Results

Scale descriptives and correlations are provided in Tables 1 and 2.

Research Question 1 was assessed with an exploratory hierarchal cluster analysis was conducted to discover patterns in the data that demonstrate how individuals grouped together on their LDR. Squared Euclidean distances were used as the basis of cluster formation according to Ward's method (Norusis, 1990). This method groups participants together based upon their level of each LDR component. This works by determining the distance between the two most dissimilar points of the clusters being combined. When

there is a significant drop between the change or distance between clusters, this is the optimal number of clusters or groups of subjects (Powell & Mainiero, 1999).

An examination of the coefficients suggested that a two-cluster solution was optimal. The analysis yielded two distinct groups. As can be seen in Table 3, cluster one was labeled "Mature LDR" as the 273 individuals grouped into this cluster had a higher general readiness to learn, a higher LPS-score, were more motivated to lead across all three scales, and higher leadership efficacy. The second cluster, labeled "Emerging LDR" as the 55 individuals grouped into this cluster were less ready to learn in general, held a lower LPS-score, were less motivated to lead across all three scales, and had lower leader self-efficacy. This supports the contention in the literature that the LDR variables vary. It is also important to note that the majority of students entering the freshman year leadership development program enter college with a mature LDR, which may not reflect the general population of freshman students.

A binary logistic regression was used to determine how the antecedents predicted cluster membership. To test hypotheses 1(a,b,c) 2, 3, and 4 (a,b,c,d) cluster membership was regressed on demographics (GPA, ethnicity, gender), triggering event, previous experience, and supportive environment (SES, engagement in high school and the presence of role models and mentors). A significant regression equation was found (χ^2 = 81.49, $p < .001$, df = 1). See Table 4.

Hypothesis 1a,1b, 1c assessed whether demographic variables such as high school GPA, ethnicity, and gender would predict having a higher LDR. The effect of demographic variables on LDR were not significant.

Hypothesis 2 assessed whether having a triggering event would predict having a higher LDR. The effect of having a triggering event on LDR was not significant.

Hypothesis 3 assessed whether previous experience with leadership would predict having a higher LDR. The results support Hypothesis 3 as previous leadership experience predicted having a higher LDR (B = -1.934, p < .005).

Hypothesis 4a, 4b, 4c, 4d assessed whether environmental support factors such as family SES, the presence of an adult mentor, the influence of a peer role model, and engagement in high school would predict having a higher LDR. The results supported Hypothesis 4a and 4b such that coming from a higher SES (B = -.568, p <.001), and having a peer role model (B = -.990, p <.05) were found to predict higher LDR. The results do not support Hypothesis 4c that having an adult mentor would predict higher LDR. The results provided partial support for Hypothesis 4d as having a sense of belonging in high school (B = -.778, p <.05), and being engaged in high school through values (B = -1.279, p <.01) were found to predict greater LDR. High school academic self-efficacy was found to predict being in the lower emerging LDR (B = 1.352, p <.005).

Hypothesis 5a, 5b assessed whether having a higher LDR during one's freshman year of college was associated with participating in co-curricular positions during one's sophomore and junior year of college. The results partially supported this hypothesis as a binary logistic regression determined that students with a higher LDR during their freshman year of college participated in more sophomore year co-curricular positions (χ^2 = 4.60, p < .05, df=1) (B = .657, p<.05), but were not more likely to be involved in co-curricular positions during their junior year of college. See Tables 5 and 6.

Hypothesis 6a, 6b assessed whether having a higher LDR during one's freshman year of college was associated with participating in a club during one's sophomore and junior year of college. The results partially supported this hypothesis as students with a higher LDR during their freshman year of college were more likely to be participating in a club sophomore year ($\chi^2 = 5.81$, $p < .05$, df=1) ($B = .821$, $p < .05$) but were not more likely to be participating in a club junior year. See Tables 7 and 8.

Hypothesis 7a, 7b assessed whether having a higher LDR during one's freshman year of college was associated with participating in leadership development experiences during one's sophomore and junior year of college. The results provided support as students with a higher LDR during their freshman year were more likely to participate in leadership development experiences during their sophomore ($\chi^2 = 16.64$ $p < .001$, df=1) ($B = 1.41$, $p<.001$) and junior year of college ($\chi^2 = 7.57$, $p < .01$, df=1) ($B = 1.47$, $p<.01$). See Tables 9 and 10.

Previous experience and supportive environment were associated with the mature LDR cluster such that those with more high school leadership experience, higher SES, having a peer role model, and greater high school engagement through valuing school and feeling a sense of belonging were more likely to have higher LDR. Those with higher high school academic self-efficacy were associated with having a lower emerging LDR entering college. An individual's LDR entering college predicted whether or not they participated in co-curricular positions during their sophomore year of college, clubs during their sophomore year of college, and leadership development experiences during their sophomore and junior year of college. In the next section, limitations, implications, and future directions are discussed.

Discussion

In this research, our conceptualization of LDR aimed at bringing together the body of research and defining the motivational components of LDR. Our findings suggest two clusters of individuals in terms of their motivational portion of LDR which we termed Mature LDR and Emerging LDR. Those coming from a highly supportive environment with higher SES, more previous leadership experience, and greater school engagement were in the Mature LDR cluster. Future research should determine how LDR as measured here combined with ability to develop predicts participation in further leadership development for college students and post-graduate career. This study offers further credence to the idea that engagement in school in general as well as the opportunity to participate in leadership activities are important in the development of future leaders. Furthermore, this study offers psychometric affirmation that the LDR components have convergent validity and discriminant validity through the moderation correlations amongst the LDR variables.

As hypothesized, this study found that coming from a higher SES contributed to having a more developed leader readiness in college. Individuals coming from a higher SES are able to capitalize on the enriched environment and wider range of accessible developmental opportunities that begins during childhood (Bradley & Corwyn, 2002) and shapes later educational outcomes (Kan & Tsai, 2005; Yunus & Dhalan, 2013). It was expected that SES would have an impact on the motivational components of LDR as SES increases the expectations for oneself in a future job (Pisarik & Shoffner, 2009) and the likelihood of participating in positional leadership positions while in college (Soria, Hussein, & Vue, 2014).

Past leadership experience was the strongest predictor of Mature LDR. Intuitively it makes sense that individuals with prior leadership experience are likely to be more developmentally ready to lead entering college. Students with past leadership experience have demonstrated prior motivation to lead and successful leadership experiences will likely enhance their leadership self-efficacy. As we measured the motivational components of LDR, prior leadership experience likely increases the development of a LPS, LSE, MTL and subsequently one's LDR. Ability to lead was not measured in the present study, future research should examine how these factors contribute to successful leadership ability.

Having a peer role model can be particularly powerful throughout one's life, but particularly during the highly influential developmental years of high school and college. Peers can influence the activities someone pursues prior to and during college and having a peer mentor who is involved in leadership can encourage the participation in the mentee (Thompson & Reichard, 2016). It is unsurprising that we found that freshman college students with a peer mentor were more mature in their LDR.

Students who develop a stronger identification with their high school enter college with a more mature LDR. These students greatly valued all their high school had to offer and took pride in their school. It makes intuitive sense that the more students put into their overall high school experience, the more they will receive in developmental and educational returns. Students who take pride in their school may be more inclined to become involved and take on leadership activities. Furthermore, it would be expected that valuing the acquisition of skills and knowledge in high school will have led to a greater breadth of developmental gains, one of which is leadership. Students who

developed a strong sense of identity with their high school also have a propensity to feel a sense of belonging with peers, faculty, administrators (Leithwood, 2000). Developing these relationships expose students to opportunities for finding a peer mentorship or developing a mentee relationship with an adult. Students who feel a sense of belonging with their classmates, teachers, and administrators receive an enriched high school experience through perceivable environmental support.

Another area of engagement is student academic self-efficacy. Students with a high academic self-efficacy view themselves as competent learners, often have a deep value for school, are highly immersed in their schoolwork, and have a favorable attitude towards school. These students were typically found in the emerging LDR cluster. Belief in one's ability to learn is an excellent orientation for development, however, high school education is not specifically tailored to teaching students the skills necessary to develop as a leader. While these highly confident and motivated learners have the correct mindset to develop as leaders, they may not have formally developed their leadership skills within their high school classroom or become in engaged in leadership learning outside of the classroom. Therefore, school engagement through academic self-efficacy might not necessarily predict having a mature leadership developmental readiness entering college, but it may predict 'catching up' to mature LDR after students have been exposed to leadership training in college coursework. Longitudinal research should evaluate whether or not the emerging leadership group catches up to the mature leadership group after exposure to college leadership programs.

Leadership outcomes were explored by examining whether or not the first-semester leadership students participated in co-curricular, club, and/or leadership

development experiences during their sophomore and junior years. Our results indicated that entering a freshman year leadership development program with higher LDR predicts participating in co-curricular and club positions during one's sophomore year of college. Also, a higher LDR entering college leadership development programs is associated with more leadership development experiences than those entering with a lower LDR. This indicates that students with a high LDR are proactive in developing their leadership skills through academics or practice and leadership development programs need to do more to encourage those with a lower LDR entering college to participate in leadership development experiences.

Theoretical Implications

The theoretical contributions of this research include establishing a coherent framework for LDR by tying together the existing body of research on the construct. It provides empirical evidence for the inclusion of motivation to lead, leadership self-efficacy, leader possible self, and general readiness to learn as the motivational components of LDR. It also indicates that there are two groups of individuals in terms of their motivational aspects of LDR. Mature LDR individuals have had a rich environment that has provided the support needed for someone to be ready to develop. Environmental support factors are meaningful antecedents to developing a high level of LDR and include such things as SES, past leadership, and school engagement. Ultimately, the more support an individual has, the more likely they will be ready to develop as a leader. The more ready an individual is to develop as a leader, the more likely they will be to participate in leadership experiences during their subsequent years of college. In addition,

this research provides support and validation for Sessa et al. 2017's leader possible self-scale.

Practical Implications

Leadership development is a continuous process over the course of someone's lifespan. Therefore, there are implications for development opportunities for individuals in college and in organizations. This research suggests that a supportive environment will enhance the motivational components of one's LDR. One way for individuals to build upon their readiness to develop leaderships is through increasing one's self-awareness. An example of this might include assessing an individual's GO to help the leader become aware of his or her tendencies. This can be used to promote LGO which has been linked to both general and leadership specific self-efficacy. Leadership self-efficacy can be further developed through enactive mastery (allowing individuals to gain leadership experiences that will enhance their self-confidence), vicarious modeling (role modeling or mentor relationship to demonstrate successful leadership), verbal persuasion (coaching and encouragement) and arousal (creating enthusiasm about becoming a leader) (Bandura, 1997). Feedback-seeking behavior should be built into training programs as it increases LGO, promotes self-regulation, and ultimately developmental readiness. Organizations and universities providing leadership development programs should provide environmental supports and encourage feedback seeking behavior in order to maximize the aforementioned motivational components of their developing leaders. Practioners should focus on creating a supportive environment conducive to LDR when developing students in high school, college, and in developing leaders within organizations. This should also be considered when designing leadership events and

opportunities at the schools. This study offers further credence to the idea that engagement in school in general as well as the opportunity to participate in leadership activities specifically are important in the development of future leaders. Educators need to continue to develop ideas that will encourage all students (starting in high school) to take control and engage in their own learning and their own leadership learning.

This study also provides evidence that students who are ready to develop leadership skills are more likely to become involved in clubs and co-curricular positions. Enhancing leadership readiness may be one avenue to promote college engagement. Additionally, the majority of students participating in the freshman year leadership development program entered with a mature LDR. This indicates the leadership program is attracting leaders who are already highly motivated to lead. The high motivation to lead may not reflect the typical college students and indicates that universities with leadership development programs would benefit if efforts are made to diversify the type of student college leadership programs are attracting. Currently, leadership development programs are targeting students who are already motivated to lead. This poses the question of how universities might be able to attract less motivated leaders to participate in the program.

Limitations and Future Research

As with all research, there were some limitations to this study. This research was not immune to the ill-effects of self-report and correlational research which may have affected the results. The survey given was quite long and although answers were checked for completeness, there was no way to determine how hastily the answers were given. Also, this research only examined the motivational components of LDR as they are the

most developable. The ability to develop also plays a key role in one's LDR and should be examined in future research. Future research should also explore the consequences of LDR by exploring the developmental pathways college students take. For example, Mature LDR students might be more likely to take on leadership positions in college, whereas the Emerging LDR group may look to take coursework to develop as a leader before beginning to practice their leadership skills within in organization. Additional research should look to determine if the college leadership development programs increase motivational LDR. If programs are successful at increasing a student's LDR, the emerging LDR students should eventually 'catch up' to the mature LDR students in terms of their motivational LDR components and subsequently their participation in leadership development experiences over the course of the college program. Future research should look to see how LDR as measured here predicts participation in leadership positions for college students and post-graduation career.

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Table 1

Means, Standard Deviations, and Correlations of LDR Components

Variable	Mean	S.D.	1	2	3	4	5	6	7
Cluster	1.17	.37	1						
GRL	4.15	.46	-.392**	1					
LPS	3.54	.43	-.279**	.326**	1				
LSE	3.98	.76	-.768**	.509**	.243**	1			
MTL AI	3.55	.61	-.380**	.430**	.253**	.382**	1		
MTL SN	3.92	.61	-.267**	.378**	.448**	.318**	.292**	1	
MTL NC	3.54	.76	-.348**	.486**	.307**	.372**	.390**	.235**	1

Note. $N = 328$.

* $p < .05$. ** $p < .01$

Table 2

Inter-scale Correlations

Variable Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
LDR	1																				
HS GPA	-.047	1																			
Race	.101	.177**	1																		
Gender	.199**	.046	-.008	1																	
Triggering Event	.147**	-.047	.081	.173**	1																
SES	.081	.211**	.271**	-.110*	-.039	1															
Past Leadership	.434**	.007	.074	.201**	.199**	.061	1														
Peer Role Model	.148**	-.001	.105*	.099	.175**	.067	.126**	1													
Adult Mentor	.191**	-.007	.070	.066	.255**	.068	.143**	.485**	1												
Engagement- RSR	.026	.086	.002	.060	-.026	.013	.070	.063	-.040	1											
Engagement- CRI	.069	.042	.023	.005	.018	-.001	.036	.082	.026	.325**	1										
Engagement- EA	.074	.037	-.048	.034	.004	-.013	-.005	.028	-.001	.278**	.404**	1									
Engagement- SoB	.077	-.010	.041	.032	.001	-.008	.079	.003	-.024	.414**	.414**	.493**	1								
Engagement-V	.112*	.036	.006	.108*	-.021	-.128	.029	.011	.005	.520**	.447**	.446**	.685**	1							
Engagement- ASE	.002	.142*	.107*	.105*	-.040	.037	.036	.010	-.039	.473**	.375*	.284**	.623**	.588**	1						
Soph-CoCP	.146*	.037	.095	.006	.120	-.018	.150*	.043	.119	.062	.006	-.065	-.053	-.013	.018	1					
Jun-CoCP	.021	.100	-.168	.014	.136	-.055	.195	.015	-.053	-.079	-.001	-.052	-.111	-.132	-.233*	.340**	1				
Soph-CP	.177*	-.003	.136	.064	.030	.140	.276**	-.040	.046	.114	.166*	.036	.071	.047	.087	.161*	.221*	1			
Jun-CP	.092	.176	.146	.078	.213*	-.048	.181	.028	.108	.229*	.132	.136	.103	.106	.048	.224*	.039	.460**	1		
Soph-LDE	.278**	-,074	.136	.141	.238**	.129	.299**	.168*	.146*	.088	.060	-.019	.011	.012	-.040	.235**	.054	.383**	.262*	1	
Jun-LDE	.278**	.040	.046	.149	.264**	-.010	.293**	.135	.249*	-.020	.020	.050	-.054	.007	-.033	.263*	.384**	.363**	.337**	.374**	1

Note. N = 328. $^{**}p < .01$, $^{*}p < .05$. Engagement- RSR = Responding to School Requirements, CRI = Class Related Initiative, EA = Extracurricular Activities, SoB = Sense of Belonging, V = valuing, ASE = Academic Self-Efficacy. Soph-CoCP = Sophomore Co-Curricular Participation. Jun-CoCP = Junior Co-Curricular Participation. Soph-CP = Sophomore Club Participation. Jun-CP = Junior Club Participation. Soph-L = Sophomore-Leadership Development Experience. Jun-LDE = Junior-Leadership Development Experience.

Table 3
Cluster Names, Size, and Means

	Cluster 1	*Cluster 2*
	Mature LDR	*Emerging LDR*
Cluster Size	273	55
Means		
GRL	4.24	3.75
LPS	3.61	3.30
LSE	4.24	2.70
MTL AI	3.66	3.03
MTL SN	4.00	3.43
MTL NC	3.62	3.10

Table 4
Logistic regression predicting LDR Clusters

Variables	*B*	SE
HS GPA	-.193	.624
Race	-.109	.425
Gender	.545	.451
Triggering Event	-.450	.475
SES	-.568***	.202
Past Leadership	-1.394****	.289
Adult Mentor	-.417	.505
Peer Role Model	-.990*	.490
Responding to School Requirements	-.113	.381
Class Related Initiative	.485	.292
Extracurricular Activities	-.323	.211
Sense of Belonging	-.778*	.407
Valuing	-1.279**	.473
Academic Self-Efficacy	1.352***	.451
$\chi 2$	81.49****	

Note. $N = 328$. * $p < .05$, ** $p < .01$, *** $p < .005$, **** $p < .001$

Table 5

Logistic regression predicting Sophomore Co-Curricular Participation

Variables	*B*	SE
	.657*	.325
$\chi 2$	4.60*	

Note. N = 208.

* *p* < .05, ** *p* < .01, *** *p* < .005, **** *p* < .001

Table 6

Logistic regression predicting Junior Co-Curricular Participation

Variables	*B*	SE
LDR	.098	.471
$\chi 2$	0.44	

Note. N =97.

* *p* < .05, ** *p* < .01, *** *p* < .005, **** *p* < .001

Table 7

Logistic regression predicting Sophomore Club Participation

Variables	*B*	SE
LDR	.821*	.366
$\chi 2$	5.81*	

Note. N = 208.

* *p* < .05, ** *p* < .01, *** *p* < .005, **** *p* < .001

Table 8

Logistic regression predicting Junior Club Participation

Variables	*B*	SE
LDR	.477	.515
$\chi 2$	.862	

Note. $N = 97$.

* $p < .05$, ** $p < .01$, *** $p < .005$, **** $p < .001$

Table 9

Logistic regression predicting Sophomore Leadership Development Experience

Variables	*B*	SE
LDR	1.42***	.382
$\chi 2$	16.64***	

Note. $N = 208$.

* $p < .05$, ** $p < .01$, *** $p < .005$, **** $p < .001$

Table 10

Logistic regression predicting Junior Leadership Development Experience

Variables	*B*	SE
LDR	1.47**	.565
$\chi 2$	7.57**	

Note. $N = 97$.

* $p < .05$, ** $p < .01$, *** $p < .005$, **** $p < .001$