LOYOLA UNIVERSITY CHICAGO

THE INFLUENCE OF SOCIAL NETWORKING ON SOCIALLY RESPONSIBLE

LEADERSHIP

A DISSERTATION SUBMITTED TO

THE FACULTY OF THE GRADUATE SCHOOL

IN CANDIDACY FOR THE DEGREE OF

DOCTOR OF PHILOSOPHY

PROGRAM IN EDUCATION

BY

MICHELLE L. KUSEL

CHICAGO, IL

AUGUST 2019

ACKNOWLEDGMENTS

It takes a village. To my biggest fans: thank you for holding me up to the sunshine and lending a shoulder to weather the storm. To my doubters: thank you for pushing my limits and making me recommit to my Ph.D. journey. I appreciate you all.

To my committee: Dr. John Dugan, Dr. Meng-Jia Wu, and Dr. Darren Pierre. Meng-Jia, I felt your kindness in my core. Thank you for being a light during a difficult period in my coursework, offering to record lectures when I missed class to give birth! I held your voice close so that I would understand the course content; but also, your voice echoed your commitment to my success. Darren, thank you for honoring my experience allowing me space to recalibrate when needed. And to John, my chair. Words will not adequately capture what you mean to me as a scholar, professional, and human. You made this last year exciting and enjoyable. Your questions, whether connected to my writing or simply asking "how are you?" always elicited strong responses that made *me* and *my work* better. Thank you for being a role model and friend.

To my parents: Mom and Dad. Thank you for setting a positive example for me, teaching me the importance of hard work. Thank you for showing up, whether in the last church pew or in the Mini Winnie. To my sister: Missy. Thank you for always listening and providing all the necessary distractions. Also, for the cookie cakes. To my nieces: Kaylin and Allie. Thank you for being authentic and genuine cheerleaders to your Aunt Chell.

To my sisters through this experience: Norma and Destiny. Thank you for being a safe place to rant, brag, cry, scream, and laugh. I BELIEVE in you and I thank you for teaching me to believe in myself.

To our family caretaker: Jessie. Thank you for taking care of our boys, but also me. Thank you for bringing me cookies and milk while I wrote, for showing up in negative 50-degree windchills, and for telepathically knowing to move the pepperoni to one side of the pizza.

To my children: Andrew and Connor. Andrew, I am amazed at the interest you took in my Ph.D. journey chanting "Chapter 5!" or telling me I was going backwards since I wrote Chapter 2 after Chapter 3. Thank you for your accountability. For the late nights where I missed bedtime, I'm sorry. Connor, my little 626, you helped me combat the demon of procrastination with your unpredictability. Thank you for your spirit and bringing laughter into our home that is needed after an intense writing session.

Finally, to my partner, by every definition of the word: Brian. Thank you for always saying yes to the adventure. Thank you for all the 12+ hour days. Thank you for all the proofreading. Thank you for giving me the purple stone and forehead kisses.

For my grandma, Theresa Augustine, whose prayers still protect me.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABSTRACT

This study advances the literature surrounding the interplay of social networking, socially responsible leadership, and social perspective-taking. The need to explore these connections are important; however, there remains a dearth of evidence from large scale studies (Ahlquist, 2017; Baek, et al., 2012). This study examined to what extent, if any, social networking influences college students' capacities for socially responsible leadership. More specifically,

- To what extent, if any, does social networking **<u>frequency</u>** influence college students' capacities for socially responsible leadership?

- To what extent, if any, does social networking **<u>proficiency</u>** influence college students' capacities for socially responsible leadership?

- To what extent, if any, does social networking **<u>centrality</u>** influence college students' capacities for socially responsible leadership?

This study also explored social perspective-taking as an intermediate outcome

- To what extent, if any, does the inclusion of **<u>social perspective-taking</u>** as an intermediate outcome shape the influence of social networking on college students' capacities for socially responsible leadership?

Results demonstrate that social networking provides a value-added, consistent, and statistically meaningful contribution to explain variance in college students' leadership outcomes. Additionally, post-hoc analyses determined that social networking remained meaningful in the context of high impact practices.

CHAPTER 1

INTRODUCTION

Inundated with an exorbitant number of technologies, college students face an implied expectation to master these ever-changing mediums in all areas of their lives. More specifically, college students are often assumed experts with social networking (i.e., an online digital platform distinguished from other technologies due to the interaction required to socially engage; Martínez-Alemán, 2014), given its omnipresence in many of their lives (Junco, 2014). Even though social networking is generally accepted as a critical part of life and learning today (Junco, 2014), research on digital experiences remains scant (Ahlquist, 2017). This leaves scholars and practitioners alike with questions on how to best support college students as they navigate social networking usage as well as how social networking usage shapes their educational experiences.

Perhaps no other arena is more ripe for exploration than the relationship between social networking usage and the educational impact on leadership development. Cultivating the next generation of citizen leaders has long been a historical and contemporary imperative of higher education systems (Bowen & McPherson, 2018; Stearns, 2009). Leadership, as a process, is also driven by human interactions, which are occurring more often in digital spaces.

Social networking allows communication to flow in many directions and at rapid speeds, changing the way individuals obtain, process, and disseminate information (Avolio & Kahai, 2003). This shift provides opportunities for interaction (Rosen & Nelson, 2008) that may allow students to learn socially responsible leadership from one another without having to interact in

person (Hoffman & Vorhies, 2017). Socially responsible leadership is defined as "a purposeful, collaborative, values-based process that results in positive social change" (Komives & Wagner, 2017, p. 19), and scholars position socially responsible leadership as the most common approach to college student leadership development (Komives & Wagner, 2017).

The importance of social networking in leadership is growing exponentially, exposing issues and creating opportunities for student leaders (Cabellon & Brown, 2017). Emerging research indicates the potential influence social networking has on leadership education and experiences (Cabellon & Brown, 2017) as social networking provides opportunities to build relationships for social good (Ahlquist, 2017). Engagement with others is heightened through social networking (boyd & Ellison, 2007; Glazer-Raymo, 2016; Martínez-Alemán, 2014), suggesting there may be additional influences between social networking and the need to understand another's perspective. Social perspective-taking, or "understand[ing] how a situation appears to another person and how that person is reacting cognitively and emotionally to the situation" (Johnson, 1975, p. 241), may shape an individual's understanding of themselves in the context of social networking engagement (Galinsky, Ku, & Wang, 2005; Johnson, 1975) and result in leadership capacity building (Dugan, Bohle, Woelker, & Cooney, 2014; Johnson, Dugan, & Soria, 2017). The need to explore the connection between social networking and socially responsible leadership is important; however, there remains a dearth of evidence from large-scale studies (Ahlquist, 2017; Baek, Wojcieszak, & Delli Carpini, 2012; Papacharissi, 2004). By neglecting important research surrounding the critical and influential student experience of engaging in social networking, leadership educators will lack the ability to optimize the effectiveness of interventions with their students.

Statement of Problem

Researchers face several challenges when studying technology, including social networking, as a general environmental influence. The dynamic nature causes research to be outdated soon after it is conducted, analyzed, and published. These same dynamics are also what makes technology, and social networking, fascinating to study differentiating the communication that occurs over technology (i.e., computer-mediated) from traditional (i.e., in-person) communication. There are two concepts based in communication studies that further unpack this phenomenon: the social information processing theory and benign disinhibition.

The social information processing theory was one of the first theories to explore online relationship development (Walther & Braithewaite, 2008), and it suggests that computer-mediated and in-person communication are equally effective; however, computer-mediated communication may require additional time to establish relationships (Walther & Braithewaite, 2008). This may be because traditional communication cues are unavailable through computer-mediated communication (i.e., emotional, impression-bearing, relationship management) and are substituted through language and writing (e.g., word content, style, frequency, length of messages). Approximately 93% of in-person communication is done through nonverbal cues (Hill & Hughes, 1998), and as such, the loss of visual and auditory cues could alter understanding. However, the lack of empirical evidence makes understanding this influence difficult. The social information processing theory expects relationship development to be *slower* given the modifications needed to communicate; however, the theory argues relationships are not compromised when compared to those that take place in-person.

This argument is in contention with other scholars that believe computer-mediated communication *accelerates* trust and relationship development (Aiken, 2016; Chen & Marcus, 2012; Junco, 2014; Suler, 2004). This is referred to as benign disinhibition, a concept stating that people may self-disclose more online than they might in in-person communication (Suler, 2004), leading to both positive (e.g., synergistic discussion) and negative (e.g., rapid escalation of emotions) consequences. Further research is needed to understand both concepts and uncover the validity of each, given their direct contradiction. Thus, these theories situate social networking usage as a viable influence on leadership development.

The social information processing theory and benign disinhibition provide a foundation for understanding how relationship development may vary between online and in-person interactions, thus demonstrating an influence on socially responsible leadership development as well as social perspective-taking. However, online social change research is limited (Ahlquist, 2014). Social change is the result of the practice of socially responsible leadership. Socially responsible leadership is a critical educational outcome for today's college students, as it assists in the creation of positive social change in the community, society, or world (Dugan, 2017). Furthermore, to truly understand the community, society, or world that a student wishes to change, they must engage in social perspective-taking. Social perspective-taking requires an individual to "walk a mile in someone else's shoes," as the popular idiom states. However, extant research has not explored how social perspective-taking varies, if at all, with online versus in-person interactions.

The importance of understanding the unique contributions of social networking to leadership development cannot be overstated. Chen and Marcus (2012) found that 90% to 99% of college

students use social networking sites daily. Social networking is distinguished from other social media due to the higher levels of interaction required to engage (Martínez-Alemán, 2014). These types of interactions provide a conduit for leadership in online spaces, given that leadership is based in relationship exchanges (Komives & Wagner, 2017). However, research on college student leadership and social networking focuses far more on digital literacy (i.e., adapting to new technology quickly and effectively while demonstrating the ability to continue to expand technological knowledge as well as an awareness of social-emotional components; Ng, 2012), than on impact related to leadership development. For example, one learning outcome associated with digital leadership states that a digitally literate individual should

> explore questions such as who they are online, who they are as a leader, what they want to accomplish, what issues they are passionate about, how their social media and online activity impact their leadership capacity, and what their social media strategy is as a leader (Ahlquist, 2017, p. 59).

Exploring digital literacy among college students is a necessary but insufficient approach on its own to understanding the influences of social networking usage on college students. The application of one's literacy is an outcome that in turn has the potential to shape numerous other outcomes, including socially responsible leadership capacity.

Research Questions

The purpose of this study is to examine to what extent, if any, social networking influences college students' capacities for socially responsible leadership. More specifically, this study will analyze

- To what extent, if any, does social networking **frequency** influence college students' capacities for socially responsible leadership?

- To what extent, if any, does social networking **<u>proficiency</u>** influence college students'

capacities for socially responsible leadership?

- To what extent, if any, does social networking **<u>centrality</u>** influence college students'

capacities for socially responsible leadership?

This study will also explore as an intermediate outcome

- To what extent, if any, does the inclusion of **<u>social perspective-taking</u>** as an intermediate

outcome shape the influence of social networking on college students' capacities for socially

responsible leadership?

Significance of Study

Technology is rapidly developing. As a culture, we applaud how small the world has become

with the ability to send documents across the globe in seconds, meet the love of our life through

a dating website, or find individuals with common interests through social networking. Human

beings are social creatures and our behavior is influenced by this socialization (Gardner, Avolio,

& Walumbwa, 2005), leading to a high level of engagement on social networking sites. Since

leadership is socially constructed, it is logical that we analyze it in terms of this digital context

and humans' desires to socialize (Gardner et al., 2005). However, much of the literature neglects

to discuss how, if at all, social networking has and will influence human behavior, not to mention

leadership. It is difficult to stay current with trends, let alone engage in research to explain

college student engagement with social networking. However, this difficulty does not negate the

importance; social networking is now omnipresent in the lives of many college students,

including student leaders (Junco, 2014). Scholars have identified the importance of socially

responsible leadership development (Dugan, 2017; Komives, Lucas, & McMahon, 2013). It is

time to integrate and study the role different modes of communication (i.e., online vs. in-person communication) have in influencing socially responsible leadership.

This study will contribute to the college student leadership development literature as it relates to student engagement with social networking platforms. From a research perspective, this study will provide exploratory results that will add value to the leadership literature around online engagement in socially responsible leadership and social perspective-taking. Given that research is scarce in both areas as they relate to online engagement, contributing to the foundation of such literature is critical to advance both scholarship and educational practice.

From a practitioner perspective, this research will guide practitioners on how they may best support students in digital leadership engagement. As Avolio and Walumbwa (2014) cautioned, "leaders [should] address the reality of being more exposed in terms of not only their decisions, but literally every single communication they have had through electronic correspondence" (p. 334), as "there is little in leadership that is private anymore" (Gardner et al., 2005, p. 67). Current resources for practitioners often focus on digital identity, which, while important, is less grounded in empirical research. Digital identity focuses on telling students what not to do online rather than how to positively embrace online interaction to grow their capacity to practice socially responsible leadership, including their ability to engage in social perspective-taking. Given that today's traditional-aged college students have watched society respond uncivilly when faced with difference (e.g., terrorist attacks, school shootings, war; Seemiller & Grace, 2016), it is critical that practitioners assist in teaching students how to react and respond appropriately (LaRiviere, Snider, Stromberg, & O'Meara, 2012). Since social networking is

ever-present in many students' lives, we cannot neglect intentional online instruction and its role in cultivating socially responsible leadership development.

Conceptual Framework

The conceptual framework is modeled after Astin's (1991) input-environment-outcome (I-E-O) model allowing key input and environmental measures to be studied. These measures are then examined in the context of how they influence social perspective-taking and socially responsible leadership. Variables were organized into five blocks for analysis. Figure 1 details the conceptual model and variables. Independent variables drew from previous research focused on socially responsible leadership, social perspective-taking, and social networking. Input variables include (a) gender and (b) racial group membership. The collegiate experience is comprised of the (a) proficiency, (b) frequency, and (c) centrality of social networking in college students' collegiate experiences.

From a cognitive perspective, social perspective-taking is a multi-dimensional, higher-level cognitive function (Gehlbach, 2004), with social connections having a critical role in one's capacity for socially responsible leadership (Galinsky, Jordan, & Sivanathan, 2008; Johnson, 1975). Social networking may alter the way individuals obtain, process, and disseminate cognitive information (Avolio & Kahai, 2003) while allowing interaction and collaboration (Gikas & Grant, 2013). Therefore, the intermediate outcome of social perspective-taking was included in the conceptual model to study this juxtaposition.

Figure 1. Conceptual Framework

Student Inputs	Experiences	Intermediate Outcome	Student Outcomes
Block 1: Demographics Gender (DEM7) Racial Group Membership (DEM10a) Block 2: Pretest for Dependent Variables	Block 3: Social Networking Proficiency (SMUPRO1) Frequency (SMU1) Centrality (SMU1,2,3,4,5,6)	Social Perspective-Taking (SPT 1,2,3,4,5)	Socially Responsible Leadership Capacities Consciousness of Self Congruence Commitment Collaboration Controversy with Civility Citizenship

Contributing to the conceptual framework of the study is a theoretical framework grounded in the social change model of leadership development (Higher Education Research Institute, 1996). Tyree (1998) coined the term *socially responsible leadership* to operationalize and measure the theoretical social change model of leadership. The social change model of leadership (Higher Education Research Institute, 1996) was the first model specifically developed to inform college student leadership capacity and development. The model introduces "equity, social justice, self- knowledge, personal empowerment, collaboration, citizenship, and service" (p. 18) and focuses on two main outcomes: (a) developing self-knowledge and leadership competence in students and (b) assisting in the creation of positive social change in the community, society, or world (Higher Education Research Institute, 1996). These outcomes are achieved through seven tenets housed within three domains (i.e., self, group, society; Higher Education Research Institute, 1996).

Within the self domain (which contains the tenets of consciousness of self, congruence, commitment), college students engage in critical reflection to discern what personal qualities are

needed to assist in positive social change (Higher Education Research Institute, 1996). The second domain of group values (common purpose, collaboration, controversy with civility) looks toward the benefits of collaborative leadership development (Higher Education Research Institute, 1996). The community domain includes citizenship. Citizenship finds its crux in the interconnectedness of individuals. Terms such as *duty* and *privilege* are used to define its core tenet of serving one another toward positive social change. The seven tenets all interact with each other and are dynamic in nature, encouraging the development of knowledge, belief formation, and skill development while acknowledging the importance of critical life experiences (Dugan, 2017).

Thus, the I-E-O conceptual framework provides an approach for the measurement of influences between social networking and leadership development outcomes. The theoretical framework provides a grounding in precisely the type of leadership outcomes being studied. Taken together, they establish a roadmap allowing for a robust examination of the research questions proposed in this study.

Methodology Overview

This study is designed to explore to what extent, if any, the frequency, proficiency, and centrality of social networking influence college students' capacities for socially responsible leadership. Additionally, this study is designed to explore to what extent, if any, social perspective-taking contributes to college students' capacities for socially responsible leadership while engaging in social networking. Using data collected through the 2018 Multi-Institutional Study of Leadership (MSL) instrument, a secondary analysis will be conducted using multiple

regressions with variables grounded in previous research and the presented conceptual framework.

The MSL was first released in 2006 and uses an online questionnaire to measure core values associated with leadership development. It employs an adapted version of Astin's (1991) I-E-O model as the conceptual framework and the social change model of leadership (Higher Education Research Institute, 1996) as the theoretical framework. At the nucleus of the MSL is the measurement of socially responsible leadership, operationalized using the socially responsible leadership scale (SRLS; Tyree, 1998). The MSL instrument has seven core scales (i.e., campus climate, cognitive skills, leadership efficacy, mentoring, social change behaviors, socially responsible leadership, sociocultural conversations) as well as four sub-studies (i.e., collective racial esteem, mentoring, social perspective-taking, spirituality). Additionally, the MSL collects demographics, pre-college experiences, and college experiences. Specifically, during the 2018 cycle, items were added to the instrument to measure social networking frequency, proficiency, and centrality. This addition by the researcher and principal investigator creates an ideal platform for this study in that it provides rich data for quantitative analysis. Given the nature of this exploratory study, it will be advantageous to have a larger data set to analyze.

In 2018, 78 colleges and universities participated in the MSL, including institutions from the United States of America, Canada, Mexico, Chile, and Australia. This study will focus solely on United States institutions given the cultural contingency of both leadership (Dugan, Rossetti Morosini, & Beazley, 2011) and social networking (Abbas & Mesch, 2018; Barry & Bouvier, 2011; Trepte et al., 2016). The total sample size for the national data set was 256,289 cases. The national response rate was 29%, which is on par with the 30% response rate expected from web-

based research (Couper, 2000; Crawford, Couper, & Lamais, 2001). The total number of completed cases totaled 54,430.

Basic analyses will be run using the software package SPSS to verify that all existing scales maintain reliability. Additional analyses will be run to establish a baseline of psychometrics for the new social networking scales introduced in the seventh iteration. This will include factor analysis to determine whether the scales hold together appropriately. The researcher will then analyze the research questions by running and interpreting multiple regressions to reveal the relationship between the predictor variable and each predicted variable (Adams, 2015). All analyses will ensure that foundational assumptions associated with the analytic procedure are met.

Definition of Terms

The following terms are used throughout the study and are defined to ensure uniformity and avoid misinterpretation.

- **digital divide:** a varied understanding of and/or accessibility to technology (Mesch, 2012; Ono & Zavodny, 2008)

- **digital identity:** how an individual presents online, both through their own composition as well as through the lens of how others view their presentation and actions (Junco, 2014)

- **digital literacy:** includes "technical, cognitive and social-emotional perspectives of learning with digital technologies" (Ng, 2012, p. 1066). A successful digitally literate individual will present skills that allow them to adapt to new technology quickly and effectively while demonstrating the ability to continue to expand their technological knowledge as well as an awareness of social-emotional components (Ng, 2012).

- **digital natives:** most often grouped as the generation born after 1980 (Ahlquist, 2017; Prensky, 2001), assumed to have grown up with technology as a constant and integral part of their lives (Prensky, 2001)

- **eLeadership:** "a social influence process [that produces] a change in attitudes, feelings, thinking, behavior, and/or performance with individuals, groups, and/or organizations" (Avolio & Dodge, 2001, p. 617).

- **leadership development:** a term including both intrapersonal and interpersonal growth that assists individuals in broadening and deepening their leadership capacity (Day, Harrison, & Halpin, 2012)

- **leadership capacity:** the knowledge, skills, and attitudes required to effectively engage in leadership (Dugan, 2011b)

- **social capital:** spanning several disciplines but loosely defined as the benefit one's networks and relationships, and the resulting resources, provide to the individual (Bourdieu, 2002; Coleman, 1994; Dugan, 2017; Loury, 1977). Social capital stimulates positive social outcomes in the daily lives of individuals and communities, including, but not limited to, professional and academic success, physiological and emotional development, and safety (Steinfield, Ellison, & Lampe, 2008).

- **social media:** an umbrella term that allows multidirectional communication using an individual's personal networks. Social media is comprised of various computer-mediated communication tools, including "social networking (e.g., Facebook, Twitter), media sharing (e.g., YouTube), social news (e.g., Reddit), bookmarking (e.g., Delicious), and blogs and forums" (Glazer-Raymo, 2016, p. 7-8).

- **social networking:** a subset of social media including sites such as Facebook, Twitter, and Snapchat, as just a few examples (boyd & Ellison, 2007; Glazer-Raymo, 2016). Social networking is distinguished from other social media due to the interaction required to socially engage (Martínez-Alemán, 2014).

- **social networking centrality:** the emotional connectedness and daily integration of social networking sites into one's lifestyle (Ellison, Steinfield, & Lampe, 2007)

- **social networking frequency:** how often one engages in social networking platforms

- **social networking proficiency:** also referred to as digital literacy, social networking proficiency involves the level of technological knowledge and savvy an individual has in using technology

- **social perspective-taking:** a multidimensional, complex cognitive and emotional skill anchored in many disciplines, including leadership studies (Dugan et al., 2014). Scholars often cite Johnson's (1975) definition that has withstood the test of time:

  taking the perspective of another person is the ability to understand how a situation appears to another person and how that person is reacting cognitively and emotionally to the situation. It is the ability to put oneself in the place of others and recognize that other individuals may have points of view different from one's own. (p. 241)

- **socially responsible leadership:** "a purposeful, collaborative, values-based process that results in positive social change" (Komives & Wagner, 2017, p. 19).

Summary

This study will contribute to the college student leadership development literature as it relates to student engagement with social networking. Chapter 1 presented the statement of the problem,

research question, significance of the study, conceptual framework, methodology overview, and definitions of terms. Chapter 2 reviews all relevant literature and research related to the problem. This includes relevant and prominent communication theories (i.e., social information processing theory, benign disinhibition). From there, social networking frequency, social networking centrality, and social networking proficiency are investigated as they relate to extant literature and research. Chapter 3 introduces the detailed methodology and procedures for the proposed study.

CHAPTER 2

LITERATURE REVIEW

Emerging research indicates the potential social networking has for influencing leadership

education and experiences (Cabellon & Brown, 2017) and for providing opportunities to build

relationships for social good (Ahlquist, 2017). Despite emerging scholarship, there remains a

dearth of evidence from large-scale studies to explore these relationships (Ahlquist, 2017). As

such, the purpose of this study is to examine to what extent, if any, social networking influences

college students' capacities for socially responsible leadership. More specifically, this study will

analyze

- To what extent, if any, does social networking **<u>frequency</u>** influence college students'

capacities for socially responsible leadership?

- To what extent, if any, does social networking **<u>proficiency</u>** influence college students'

capacities for socially responsible leadership?

- To what extent, if any, does social networking **<u>centrality</u>** influence college students'

capacities for socially responsible leadership?

Additionally, research supports the importance of social perspective-taking as an

intermediate outcome in building leadership capacity (Dugan et al., 2014; Johnson et al., 2017).

This influence stems from the critical role of social perspective-taking in shaping individuals'

understandings of themselves in the context of and through engagement with others (Galinsky et

al., 2005; Johnson, 1975). Engagement with others is heightened through social networking

(boyd & Ellison, 2007; Glazer-Raymo, 2016; Martínez-Alemán, 2014), suggesting there may be an important link between social networking and social perspective-taking in the leadership development process. However, research at the intersection of social networking and social perspective-taking is scant (Alhquist, 2017). Therefore, this study will also explore

- To what extent, if any, does the inclusion of **<u>social perspective-taking</u>** as an intermediate outcome shape the influence of social networking on college students' capacities for socially responsible leadership?

This chapter will examine extant literature regarding these questions, beginning with social networking. Within this section, two relevant and prominent communication theories will be introduced: the social information processing theory and benign disinhibition. These theories assist in explaining the intentionality of selecting the categories of social networking frequency, social networking centrality, and social networking proficiency to frame the literature review, rather than focusing on specific social networking platforms (e.g., Facebook, Instagram).

Following the review of social networking, the complex cognitive and emotional skill of social perspective-taking will be introduced. This section will highlight extant literature on social perspective-taking as well as discuss developing research on how technology may influence social perspective-taking. The review will then pivot to leadership, explaining and critiquing socially responsible leadership by means of the social change model of leadership. The literature review ends by exploring the intersection of social networking and leadership through eLeadership.

Origins of Social Networking Theories

The popularity and utilization of technology has altered the way individuals obtain, process, and disseminate information (Avolio & Kahai, 2003). This change may increase interaction (Rosen & Nelson, 2008) and create a knowledge exchange that is easily accessed and co-constructed by all involved (Greenhow, 2011). Social networking sites are a type of technology that has grown especially popular. Social networking sites are online, electronic communication tools (e.g., Facebook, Twitter, Snapchat) providing individuals the ability to construct profiles, display user connections, share information, and search connections (boyd & Ellison, 2007).

Social Information Processing Theory

A popular theory borrowed from communication studies, known as the social information processing theory, explores how computer-mediated (i.e., online) communication compares to in-person communication in its capacity to allow users to develop impressions and relationships with others (Walther & Braithewaite, 2008). Prior to the development of the social information processing theory, online relationship development was theoretically unaccounted for in the literature. The theory suggests that computer-mediated communication is no less effective than face-to-face communication, with the discriminating factor being time. The social information processing theory contends that relationships developed online can achieve the same level of intimacy as face-to-face relationships but require additional time (Walther & Braithewaite, 2008).

Given that the social information processing theory is grounded in the communication literature, it is surprising that it does not tease out the complexity of only having the single dimension of language to communicate. Many of the traditional communication cues are

unavailable through online communication (i.e., emotional, impression-bearing, and relationship management cues) and are substituted for through language and writing (e.g., word content, style, frequency, length of messages). The social information processing theory does concede that the plethora of information available in in-person communications allows for rapid processing of information. This information can come from appearance, facial expressions, voice inflection and tone, touch, and personal space allocation (Walther & Braithewaite, 2008). Given that approximately 93% of in-person communication is done through nonverbal cues (Hill & Hughes, 1998), the loss of these visual and auditory cues should not be underestimated.

Therefore, in the case of online communication, where there is only one dimension to communicate cues, one must expect and allow for relationship development to be slower, but Walther and Braithewaite (2008) argue that relationship development will not be compromised. This is in direct contention with some scholars who believe online engagement accelerates trust and relationship development (Aiken, 2016; Chen & Marcus, 2012; Junco, 2014; Suler, 2004). The literature is unable to resolve this point of contention, with some studies suggesting a slowing of the ability to connect solely via online platforms and others suggesting the rate at which relationships develop is accelerated on online platforms. Resolution of this tension is imperative to identify influences of social networking on leadership development and adjust educational practice accordingly to address relationship-building needs.

Benign Disinhibition

Engaging in an online environment allows individuals to experience a higher level of comfort in a shorter period, resulting in benign disinhibition (Chen & Marcus, 2012; Junco, 2014; Suler, 2004), which escalates levels of trust (Aiken, 2016) and intimacy. This intimacy does not always

take the form of romance, but rather the disclosure of deeply held beliefs or personal information (Suler, 2004). Benign disinhibition has the potential to accelerate emotionally rich dialogue (Aiken, 2016) as compared to in-person dialogue.

Benign disinhibition is amplified when an online environment is anonymous as it creates open, egalitarian channels of communication leading to synergistic ideas and discussion (Papacharissi, 2004). However, anonymity is a double-edged sword, as it may inhibit authentic dialogue, providing opportunities to alter behavior or present a fragmented self (Suler, 2004; Walther & Braithewaite, 2008). For example, on social networking sites, a content creator (i.e., an individual making posts) may post only positive life experiences or refrain from disclosing demographic information. Such opportunities to omit or alter parts of oneself may not be as readily accessible through in-person engagement. Again, a tension emerges in which online spaces may inhibit norms of communication that expedite relationship-building but also may erode values-based norms that undergird *how* students engage with one another. Both potential outcomes would have a direct impact on how leadership development unfolds.

Additionally, technology has normalized the expectation for instant feedback (Aiken, 2016), drastically reducing time between exchanges. Specifically, with social networking, it is not uncommon to have feedback within mere minutes of posting something, in the form of comments or likes. When we post a message, a response is expected so quickly that perhaps we continue to look at our device until one arrives. This norm is also in contention with the social information processing theory as, according to the theory, additional time is needed to formulate intimate relationships (Walther & Braithewaite, 2008).

This accelerated response time could lead to an unwarranted rise in emotions. Papacharissi (2004) found that online dialogue is typically more heated than in-person interactions and is "about venting emotion and expressing … hasty opinions, rather than rational and focused discourse" (p. 270). Baek et al. (2012) found that some emotions were more intense online than in person, while others were less intense. Respondents in their study indicated they were less anxious in online dialogues; however, they showed higher levels of anger (Baek et al., 2012). However, circling back to the social information processing theory, one must address how to effectively communicate these emotions online with the loss of face-to-face communication channels.

The social information processing theory discriminates between nonverbal *functions* and nonverbal *symbols*. A function is the desired result of a symbol (Walther & Braithewaite, 2008). The best way to understand this concept is through example. If someone wanted to convey that they were in charge (i.e., the function), they might talk over someone (i.e., the symbol) in face-to-face communication. However, they would be unable to talk over someone in computer-mediated communication. The social information processing theory contends that although symbols are limited, there are other ways to depict a function. In this example, a written symbol that could portray someone wanted to declare superiority to another could be using boldface font. A separate, but apropos, example of language that communicates various functions is a love letter. While love can be communicated in many ways in person, a love letter can still portray the intentions of one's love for another through language and writing style (Walther & Braithewaite, 2008).

One of the most obvious hurdles with the social information processing theory is how intertwined it is with technology and the difficulty with keeping the theory relevant and current. Technology is extremely dynamic, and it is likely that as soon as research is conducted, analyzed, and published, it is outdated. With these points, one can look at the social information processing theory and see how it sidesteps these issues. The theory is vague and fails to acknowledge the nuances of various forms of computer-mediated communication (e.g., blogging, texting, social networking). The nuances can run deep and with social networking platforms, these nuances are represented through social networking frequency, social networking centrality, and social networking proficiency, which capture the omitted dimensions of the original theory related to time/frequency, one's skills with leveraging complex communication norms in an online environment, and the centrality of those communications to how one views and uses social networking.

Social Networking Frequency

Social networking frequency explores how often one engages in social networking platforms. In 2018, the Pew Research Center surveyed approximately 2,000 individuals 18 and older throughout the United States of America to gauge social networking use. The study found YouTube (94%), Facebook (80%), and Snapchat (78%) to be among the highest platforms for social networking usage for respondents aged 18 to 24 years. In addition to high levels of usage, this age group also indicated high levels of frequency within these platforms (Smith & Anderson, 2018).

Seventy-four percent of Facebook users accessed the social networking site at least once a day, with 51% indicating they accessed the site several times a day (Smith & Anderson, 2018).

Snapchat, while representing fewer users, has a concentrated population of 18- to 24-year-old users. Eighty-two percent of 18- to 24-year-olds use Snapchat daily, with 71% indicating multiple logins per day (Smith & Anderson, 2018).

Digital Divide

One cannot explore social networking frequency without addressing the issue of the digital divide; that is, a varied understanding of (i.e., proficiency) and/or access to (i.e., frequency) technology must be examined. Extant literature debates the existence of the digital divide, with some researchers arguing most individuals have access to technology (whether in the home or in public arenas; Anderson & Jiang, 2018; Bowen, 2013; Hargittai, 2010; Hoffman & Vorhies, 2017; Ono & Zavodny, 2008; Smith & Anderson, 2018;). As such, studies should focus on the differences between populations *using* technology (Mesch, 2012; Ono & Zavodny, 2008), rather than the differences *accessing* technology.

Most research opts for a second-level analysis assuming that individuals involved in the study have access to technology. Statistics support this assumption, particularly when addressing social networking usage among college students. Chen and Marcus (2012) found that 90% to 99% of college students use social networking sites daily. Smith and Anderson (2018) found that 88% of 18- to 29-year-olds reported using at least one social networking platform and 95% of teens own and utilize a smartphone. Besides students responding with a high percentage of using at least one social networking platform, there are no discriminating characteristics of those who do not engage in a platform (Anderson & Jiang, 2018). Despite these findings, some researchers contend that assuming second-level studies is irresponsible and may amplify social inequalities

mainly aligned with income, education, gender, and ethnicity (Bowen, 2013; Hargittai, 2010; Hoffman & Vorhies, 2017).

Data supports this claim as well, particularly when discussing home computers. The Pew Research Center found that 25% of teens from households earning less than $30,000 a year do not have a home computer. Only 78% of first-generation students report having a home computer, in comparison to 94% of their peers (Anderson & Jiang, 2018). This is evidence of the digital divide's existence; however, it supports the divide with home computer access, rather than social networking access. This clarification is not meant to belittle the differences but rather identify the opportunity gaps (Bowen, 2013), as the functions of a home computer may vary, and stretch farther, than the benefits of social networking.

Given these findings, perhaps scrutinizing the digital divide would prove beneficial at the micro level of technology, teasing out the differences in technologies (e.g., home computer, smartphone) rather than referring to technology as an umbrella term. Even though research on the digital divide mainly focuses on computers and the Internet (Junco, Merson, & Salter, 2010), all technology is generalized under the divide, and since social networking can be accessed through a smartphone, it may be advantageous to disaggregate these options.

Connected to the digital divide is the issue of social capital through social networking. Aubrey and Rill (2013) found that higher levels of frequency on Facebook resulted in higher levels of social capital in both online and offline environments. Therefore, if a student does not have access to a social networking site, they do not have access to this capital or network.

Furthermore, if students cross the digital divide, there are still differences in how they integrate social networking sites into their daily lives (Junco et al., 2010). Junco et al. (2010)

hypothesized that college students who identify as minorities on a college campus may use social networking to negate feelings of marginalization and stay connected with their support network. This emotional connectedness and integration may also be referred to as social networking centrality.

Social Networking Centrality

Social networking centrality analyzes the emotional connectedness and daily integration of social networking sites into one's lifestyle (Ellison et al., 2007). A 2018 Pew Research Center study found that just over half of 18- to 24-year-olds who engaged in social networking would find it difficult to stop using the platform (Smith & Anderson, 2018). This dependency on social networking demonstrates a level of connectedness to social networking sites and brings to life the role social networking may play in a student's digital identity (i.e., who they are online; Guidry & Ahlquist, 2016), who they become through social capital gains (Ellison et al., 2007), and how these elements actualize in the student's lifestyle.

Digital Identity

Digital identity refers to how an individual presents online, both through their own composition as well as through the lens of how others view their presentation and actions (Ahlquist, 2016; Junco, 2014). Creating a digital identity is a complex process that starts on social networking sites by creating a profile (boyd & Ellison, 2007). This profile provides an opportunity to reflect on how one can and should be viewed by others, thus providing the opportunity to explore salient identities at an earlier age (Ahlquist, 2017; boyd & Ellison, 2007; Cabellon & Brown, 2017; Junco, 2014) than peers without social networking exposure. The earlier exposure and acknowledgement of one's identity creates an opportunity for

developmental growth beyond previously conceived levels (Cabellon & Brown, 2017) that existed prior to technology. However, it also creates several challenges particularly relevant to understanding how relationships form and with implications for leadership development.

Self-Disclosure

Social networking sites operate with a presumption that individuals will self-disclose elements of themselves to connect with others. The desire and willingness to self-disclose is higher online than with in-person communication. There are a few hypotheses on why this is; however, the simplest is found in language serving as the only mode of communication. To engage successfully online, one of the only ways to communicate about oneself is through self-disclosure. Additionally, while self-disclosure may feel awkward offline, it is more accepted online (Tidwell & Walther, 2002). What one chooses to self-disclose runs the continuum from being genuine and accurate to a complete misrepresentation of oneself (Martínez-Alemán, 2014). Individuals typically present oversimplified versions of themselves with the hopes of reducing ambiguity, resulting in a fragmented or incomplete version of themselves (Chen & Marcus, 2012; Walther & Braithewaite, 2008). This becomes problematic when fragmented identities are coupled with deeper levels of trust (Ahn, 2011; Chen & Marcus, 2012; Junco, 2014; Ng, 2012; Tidwell & Walther, 2002). Content creators (i.e., those posting) may only post positive life experiences, not acknowledging their complete self. Content consumers (i.e., those receiving the post) may experience feelings of inadequacy when they compare their own lives to that of the creators (Twenge, 2017). Both have direct implications for relationship formation and leadership development.

External Interpretations

While it may initially appear that content consumers are the victims in terms of self-disclosure, a countervailing view certainly exists. There is lack of control a user must surrender regarding their digital identity. Technology allows communication to flow in many directions and at rapid speeds, changing the way individuals obtain, process, and disseminate information (Avolio & Kahai, 2003) using knowledge easily accessed and co-constructed by all involved (Greenhow, 2011). In the case of social networking, public comments may be left by others (e.g., posting to a wall, responding to a tweet, commenting on a photo). Even though an individual may not identify with another's comment, it contributes to their digital identity nonetheless.

The tweet heard around the world. One example where digital identity shook a person's in-real-life identity is referred to as "The Tweet Heard Around the World" (Ronson, 2015). Justine Sacco used the platform Twitter to chronicle a trip to South Africa. Her wit could be defined as prickly, but her 170 followers on Twitter never minded—until one did, and allegedly sent one of her tweets to a journalist at Gawker, who retweeted her tweet to his 15,000 followers (Ronson, 2015).

Sacco's tweet stated: "Going to Africa. Hope I don't get AIDS. Just kidding. I'm white!" (Ronson, 2015, p. 68). Justine recounted to Ronson (2015) what happened to her:

> Only an insane person would think that white people don't get AIDS … it was so insane … I thought there was no way that anyone could possibly think it was a literal statement. I know there are hateful people out there … but that's not me (pp. 72–3).

Sacco issued a public apology; however, damage was already done. Sacco's life was drastically altered after the tweet. She ended her family vacation early due to safety concerns and

threats, lost her job, and potentially ended her career. Sacco fears dating because her prospective

suitor might Google her. She feels as though she has no purpose (Ronson, 2015). These are

intense but real responses to a short-sighted tweet. Worse yet, Sacco believes people were happy

to see her destroyed (Ronson, 2015). Sacco's digital *and* in-person identity was destroyed, as

was her social capital.

Social Capital

Social capital spans several disciplines but is loosely defined as the benefit that an

individual's networks and relationships, and the resulting resources, provide to the individual

(Bourdieu, 2002; Coleman, 1994; Dugan, 2017; Loury, 1977). Social capital stimulates positive

social outcomes in the daily lives of individuals and communities, including, but not limited to,

professional and academic success, physiological and emotional development, and safety

(Steinfield et al., 2008). As such, social capital plays a central role regarding social networking

centrality—that is, the integration and influence social networking has on one's life and

relationships (Ellison et al., 2007). Social networking sites are held partially responsible for both

the rise and fall of social capital. Extant research debates whether social networking breeds

isolation and false representation (Chen & Marcus, 2012; Walther & Braithewaite, 2008),

leading to decreased social capital, or leads to increased communication, enhanced human

connectivity, and increased social capital (Baase & Henry, 2017; Ellison et al., 2007; Steinfield

et al., 2008).

Social networking sites can help transcend previous in-person limitations, which may

increase social capital. For example, using a social networking site, it is simple to request

resources (e.g., recommendations, opportunities). Such a request may result in an individual's

upward mobilization (Ellison, Fiore, Gray, & Lampe, 2014). However, it should be noted that college students who self-reported lower levels of social capital offline often utilized this online strategy less frequently (Abbas & Mesch, 2018; Ellison et al., 2014).

If we look to cultural differences, it is evident that cultural differences are apparent. For example, Abbas and Mesch (2018) found a direct correlation in Israeli teenagers: those with less offline social capital demonstrated less online social capital, while those with more offline social capital demonstrated more online social capital. In a study by Barry and Bouvier (2011), stark differences between students from Wales and the United Arab Emirates were apparent in several areas. For example, Welsh students viewed social networking sites as an extension of their in-person life, whereas Emirati students saw social networking sites as an opportunity to meet the world. These studies demonstrate the necessity to critically analyze online cultural norms as differences exist, at minimum, with respect to privacy and self-disclosure (Trepte et al., 2016), as well as cultural contingencies based on nationality.

Social Networking Proficiency

Social networking proficiency requires technological knowledge and savvy, or digital literacy. Digital literacy includes "technical, cognitive and social-emotional perspectives of learning with digital technologies" (Ng, 2012, p. 1066). A successful digitally literate individual will present skills that allow them to adapt to new technology quickly and effectively while demonstrating the ability to continue to expand their technological knowledge (Ng, 2012). In addition to technical know-how, individuals must be aware of the social-emotional component that requires respect and discretion (Ng, 2012).

To develop the social-emotional component requires exposure to and engagement in social networking. Digital literacy aims to "teach students to thoughtfully question and consider the choices they make as they participate in various media" (De Abreu, 2010, p. 30) rather than avoiding technology. Digital literacy teaches students to engage in online activities that are "legal, ethical, safe, responsible, and respectful" (Greenhow, 2010, p. 25).

Digital Natives

Too often, digital literacy is assumed in a group called *digital natives*. Digital natives are most often defined as the generation born after 1980 (Ahlquist, 2017; Prensky, 2001), who are assumed to have grown up with technology as a constant and integral part of their lives (Prensky, 2001). Digital natives are entering college spaces with their technological exposure in tow. However, this exposure is often incorrectly associated with digital literacy. In turn, students are not provided formal instruction on how to use technology, based on the assumption that they have acquired this knowledge through informal practices.

The very nature of social networking sites encourages knowledge exchange co-constructed by all involved (Greenhow, 2011). Therefore, engaging in social networking should informally teach digital literacy and proficiency. While ideal, this is not the reality. Ahlquist (2017) found that college students reported informal learning around digital literacy to be ineffective. Digital literacy is not intuitive or inherent and must be intentionally learned. Adding complexity, however, is that those who would be influential in leading this intentional instruction (e.g., parents, instructors) may be fueled by preconceived assumptions leading them to believe social networking sites have little value (boyd, 2014; Junco, 2014). Therefore, formal instruction toward developing digital literacy creates another tension point in which it may be viewed

simultaneously as unnecessary and also invaluable. The reality, though, is that digital literacy is both necessary and valuable. To provide a parallel example, children learn to speak prior to entering a formal school setting. However, upon entering school they are taught proper ways to read, write, and speak. Technology needs to be prioritized and given similar formal instructional space.

Instruction and Competencies

Some colleges have heard the need for formal instruction space for technology usage and have defined tangible ways to empower college students to develop social networking proficiency. Some colleges have started to embrace building technology skills in the same way they have other skills, such as critical thinking or writing skills (Thomas, 2010). The governing bodies of the higher education profession, the American College Personnel Association (ACPA) and the National Association of Student Personnel Administrators (NASPA), support the need to give more intentionality to technological competency. These organizations have updated their competencies to acknowledge technology as an independent skill. Prior to this distinction, technology was interwoven into other competencies ("Professional Competency Areas for Student Affairs Educators," 2015) diluting the importance and complexity of technology in student learning environments. Ahlquist (2017) asserts that digital education "does not need to be a new line in the budget, week of programming, or keynote speaker. However, it does need to be *intentional* and should begin with blending into existing successful programs" (p. 59, emphasis added).

Instruction that currently exists gravitates toward teaching students what *not* to do online. As one student stated in a mixed-method study conducted to explore student leaders' perception of

social networking (Ahlquist, 2017), "I have always been told what *not* to do online. But no one has ever told me what I'm *supposed to do*" (p. 47, emphasis added). Arguably, teaching students what not to do online is well intentioned but ill-conceived and perhaps unnecessary. A 2017 study performed by Ahlquist found 97.5% of social networking posts were already appropriate before intervention. Therefore, digital literacy may benefit by focusing less on what students should avoid and more on how to be proficient in utilizing social networking sites for personal and professional growth and development.

Few scholars have tackled formal social networking competencies, and even fewer have addressed college-aged students. Ribble, Bailey, and Ross (2004) created nine digital citizenship elements focused on educating K–12 students. These elements covered a breadth of technology topics, including etiquette, communication, education, access, commerce, responsibility, rights, safety, and security. Ahlquist (2014) adapted Ribble et al.'s (2004) model focusing on literacy and citizenship while integrating the social change model of leadership to introduce 10 competencies required of a digital leader. These competencies include awareness of tools and platforms, developing skills to identify false/misrepresented information, self-awareness, boundaries, privacy, time management, wellness, professional branding, building a network, integrating digital technologies into leadership, conflict resolution, and activism (Ahlquist, 2014). Three years later, Ahlquist (2017) conceptualized these elements into a digital curriculum specific to student leaders. Ahlquist's model proposed six pillars of digital leadership curriculum, including "digital identity, wellness, decision making, branding, community building, and leadership" (p. 55), categorized as either an individual or a global leadership skill.

Using the social change model of leadership as a guide, Ahlquist (2017) framed individual skills to guide a student through reflection on their digital footprint in the areas of consciousness of self, congruence, and commitment. Digital identity development aims at having a student reflect on what their digital image consciously or subconsciously says about their beliefs and values (Ahlquist, 2017; Junco, 2014). Digital wellness requires a student to "establish personal virtual boundaries, including privacy, time management, and overall wellness" (Ahlquist, 2014, p. 59). Digital decision making asks a student to think before they post, asking if the content they wish to post is appropriate. It asks students to create a thoughtful decision-making process prior to posting information online (Ahlquist, 2017).

Continuing to reference the social change model of leadership, global skills mirror group and community values (i.e., collaboration, common purpose, controversy with civility, citizenship). Digital reputation requires students to be proactive and take control of their digital brand (Ahlquist, 2017). Digital community building looks at the necessity for a student to develop a new skillset that was not required of their predecessors: to effectively manage groups and teams in a virtual environment rather than just a physical space (Ahlquist, 2017; Cabellon & Brown, 2017). Finally, digital leadership focuses on the human components of online communication. It asks students to look beyond themselves and toward the betterment of others while channeling their passions for the common good (Ahlquist, 2017). While this model provides a solid structure with which to begin digital literacy instruction, it remains mostly conceptual. Ahlquist (2017) cites only her own implementation at Florida State University using the model in practice.

The complexity of social networking has altered how communication takes place as well as how communication is studied. Social networking has forced the hand of researchers to deepen

their focus on understanding how, if at all, interactions between people differ online (Avolio & Kahai, 2003; Rosen & Nelson, 2008) from in-person encounters. The increased use (i.e., frequency), importance (i.e., centrality), and knowledge (i.e., proficiency) of social networking creates questions around what is currently known about communication and the direction in which it is heading.

Social Perspective-Taking

Social perspective-taking is a complex cognitive and emotional skill anchored in many disciplines, including leadership studies (Dugan et al., 2014). Scholars often cite Johnson's (1975) definition, which has withstood the test of time:

> Taking the perspective of another person is the ability to understand how a situation appears to another person and how that person is reacting cognitively and emotionally to the situation. It is the ability to put oneself in the place of others and recognize that other individuals may have points of view different from one's own. (p. 241)

While widely accepted, it is also rightfully critiqued. Gehlbach (2004) argued that while Johnson's definition provides a foundation on which to build a definition of social perspective-taking, it is critical to see social perspective-taking as multidimensional, accounting for both cognitive (i.e., ability to engage with another) and emotional (i.e., propensity to act) elements. Prior research typically focused on one, not both, of these elements, making it difficult to discern if these elements are both necessary and/or interact with one another (Gehlbach, 2004).

As the world continues to diversify with more opportunities to connect, the ability to engage in social perspective-taking is critical (Dey, Ott, Antonaros, Barnhardt, & Holsapple, 2010; Johnson et al., 2017; Żuromski, Fedyniuk, & Marek, 2018). However, what fosters social

perspective-taking among college students remains unknown, as research on social perspective-taking within higher education is scant (Dugan et al., 2014; Johnson et al., 2017). Exceptions include Dey et al.'s (2010) work validating the value of community service engagement, faculty interaction outside the classroom, and exposure to less popular views, as these increase one's ability to engage in social perspective-taking. Additionally, Johnson et al.'s (2017) study focused on demographics and cocurricular experiences in higher education connected to social perspective-taking. This research contributed to the knowledge base finding gender and race were factors in determining engagement in social perspective-taking. More specifically, this study found White females were more likely to engage in perspective-taking than White males. This finding is intriguing when coupled with statistics on social networking. In a study comparing online and in-person debate, Baek et al. (2012) found that 87% of those who debated using an online platform, rather than in person, identified as White, and 60% identified as male. This could suggest that social perspective-taking is not as prevalent online given the high concentration of Whites and males engaging online (Baek et al., 2012), coupled with their lack of social perspective-taking (Johnson et al., 2017).

Other notable studies toward the development of understanding social perspective-taking in a higher education context include Dugan et al.'s (2014) study on socially responsible leadership. This study discovered a strong direct effect of social perspective-taking on group-level leadership values and an indirect effect on societal-level leadership values in relation to the ability to engage in social perspective-taking. These findings can inform program design for practitioners as there is a gap in galvanizing research into practice. As we fill voids in the literature, the evolving world creates new voids. In this case, technology cannot be ignored when

exploring social perspective-taking, and unfortunately none of the above studies consider the role of social networking in influencing either social perspective-taking or leadership development.

Digital Dialogues

A plethora of new online communication technologies (e.g., blogs with enabled comment sections, instant/private messaging) have emerged in recent years and integrated with social networking platforms. These technologies have the potential to reshape the ways in which social perspective-taking is either leveraged or constrained in digital contexts. With these technologies, online dialogues may look different than previously held in-person dialogues and may influence how we engage, empathize with, and understand one another (Sobieraj & Berry, 2011). Scholars have yet to deeply explore the effects these changes have (Baek et al., 2012; Papacharissi, 2004), potentially due to the recency of the topic coupled with the time needed to conduct quality research (Herbst, 2010).

Today's world relies heavily on technology. But does the Internet limit our points of view as we look for people and topics that are like-minded, encouraging ideological isolation (Baase & Henry, 2017)? For those that break free from this ideological isolation, are they able to engage in social perspective-taking? Papacharissi (2004) found that when conversations became heated online they "would be toned down by the discussants themselves, who realized that their exchanges were reaching the point of nonsensical rants. At this point, the discussants would frequently apologize to each other for unnecessary use of sarcasm or other impoliteness" (p. 277). Discussants were able to recognize that their comments and rants might be hurtful and out of line. As self-awareness is a high predictor of engagement in social perspective-taking (Dugan

et al., 2014; Johnson et al., 2017), this example provides insight into online engagement in social perspective-taking.

Virtual Reality

Virtual reality (VR) technology introduces digital humanism (Żuromski et al., 2018), where technology "extend[s] and develop[s] new tools of social cognition, especially … the possibility to take perspectives of others" (p. 1). For example, VR can allow users to experience what it would be like to have autism or color blindness. Experiencing VR demonstrated prolonged behavior adjustment in comparison to other forms of communication (i.e., print, video; Ahn, Bailenson, & Park, 2014).

Virtual reality has the potential to bring social perspective-taking to a new level, as it requires the receiver to infer less (e.g., how would it feel to be unable to see the color red?). It also removes the need for a chance interaction or discussion with someone with a different viewpoint or life to be exposed to a view other than one's own. This could advance one's ability to engage in social perspective-taking, as Gehlbach, Marietta, King, Karutz, Bailenson, and Dede (2015) found that experiencing, instead of passively learning about, another's perspective resulted in positive relationships and greater compromise. This finding is consistent with previous findings that indicate that engagement and bias can influence outcomes regarding social perspective-taking (Gehlbach et al., 2015).

Bias

Stocks of knowledge and social location are powerful inherent biases influencing how we understand situations and others (Dugan, 2017). Stocks of knowledge are "commonsense assumptions or rules that govern how individuals view, interpret, and experience the world"

(Dugan, 2017, p. 34). Social location is "the position one holds in society based on a variety of social identities (e.g., race, socioeconomic status, gender identity, sexual orientation, geographic location, occupation) that are considered important to and in turn frame how the world is experienced" (Dugan, 2017, p. 39). Both concepts are influenced by technology and, in turn, influence social perspective-taking.

Embracing technology eliminates geographic barriers and stereotypes that may form (Walther & Braithewaite, 2008), which may help eliminate social and residential segregation (Mesch, 2012). Additionally, gathering individuals from various backgrounds with different stories may enrich worldviews and increase social perspective-taking (Mesch, 2012). Continual exposure through these online environments could lead to positive relationships that might have been avoided in person due to a prejudgment of a visible identity. However, it could also lead to less authentic relationships as individuals choose not to self-disclose information they believe may cause them to be prejudged. Additionally, does technology allow for the creation of echo chambers creating a perception of shared, normative assumptions rather than a multiplicity of perspectives? Does the Internet limit our points of view as we look for people and topics that are like-minded, encouraging ideological isolation (Baase & Henry, 2017)?

Social perspective-taking is multi-faceted, as are the environments for which it is operationalized. This ever-evolving complexity is intensified when witnessing how social networking may activate one's ability to engage in social perspective-taking. In some cases (e.g., virtual reality, digital dialogues), technology may have the ability to enhance one's social perspective-taking. However, social perspective-taking can easily be limited if technology leads individuals into echo chambers vibrating their own beliefs and biases.

Socially Responsible Leadership

The social change model of leadership (Higher Education Research Institute, 1996) was the first model specifically developed to inform college student leadership capacity and development. The model introduces "equity, social justice, self- knowledge, personal empowerment, collaboration, citizenship, and service" (p. 18) and focuses on two main outcomes: (a) developing self-knowledge and leadership competence in students and (b) assisting in the creation of positive social change in the community, society, or world (Higher Education Research Institute, 1996). These outcomes are achieved through seven tenets housed within three domains (i.e., self, group, and society; Higher Education Research Institute, 1996).

Consciousness of self, congruence, and commitment are included in the self domain. Within this domain, college students engage in critical reflection to discern what personal qualities are needed to assist in positive social change (Higher Education Research Institute, 1996). Consciousness of self has two elements: awareness of personality and mindfulness. To be aware of one's own personality means to understand one's aspirations, talents, interests, and limitations. To be mindful calls for "a propensity to be an accurate observer of your current actions and state of mind" (Higher Education Research Institute, 1996, p. 31). This mindfulness, specifically, is a key proponent of social perspective-taking in that it requires an individual to be alert to their own behaviors and biases. Congruence means to think, feel, and act consistently with one's values while remaining authentic. Finally, commitment is grounded in the need to enact change through leadership. This change cannot come to fruition with only a snippet of time, but rather requires a purposeful investment of time and energy (Higher Education Research Institute, 1996).

The second domain of group values looks toward the benefits of collaborative leadership development and includes common purpose, collaboration, and controversy with civility (Higher Education Research Institute, 1996). Common purpose means that a group has a mutual set of values and vision. Collaboration means to work effectively with others toward this common purpose. It involves sharing responsibility, authority, and credit. Controversy with civility is defined as "disagreements and disputes which arise when those holding contrasting perspectives and opinions are encouraged to share their views … committing themselves to understand the nature of the disagreement" (Higher Education Research Institute, 1996, p. 60). The social change model of leadership addresses the concept of conflict with civility as being ever-present and serves as an agitator to advance group dynamics and push the limits of creativity (Alvarez, 2017). To achieve this, however, a level of trust must be established allowing members to speak openly without judgment or being silenced. Additionally, it requires a group to embrace the idea of conflict with civility, recognizing that it not only *can* exist but *should* exist, be encouraged, and be ever-present (Alvarez, 2017). Understanding controversy with civility is critical to understanding the engagement of social perspective-taking because, to adopt and internalize another's view, one must first be aware of its existence. This awareness will only occur if controversy with civility is embraced in a group.

The community domain includes citizenship. Citizenship finds its crux in the interconnectedness of individuals. Terms such as *duty* and *privilege* are used to define its core tenet of serving one another toward positive social change. The seven tenets all interact with each other and are dynamic in nature, encouraging the development of knowledge, belief formation, and skill development while acknowledging the importance of critical life experiences

(Dugan, 2017). Tyree (1998) coined the term *socially responsible leadership* to operationalize and measure the social change model of leadership. Thus, socially responsible leadership becomes the set of capacities being developed as a result of a grounding in the social change model.

Critical Reflection on the Social Change Model of Leadership

The social change model of leadership is one of the most commonly used theories in higher education (Dugan, 2017; Owen, 2012), but it is not without flaws. The first troublesome assumption is the assumption of group establishment and trust (Alvarez, 2017). The need for trust restricts the effectiveness of the model when looking at leadership development that may take place outside a group that has established trust and respect. Looking to online engagement, the necessity of trust plays an interesting role. While higher levels of trust may be expedited online (Ahn, 2011; Chen & Marcus, 2012; Junco, 2014; Ng, 2012; Tidwell & Walther, 2002), this trust cannot be assumed in all online settings. If there is not trust in a setting (online or offline), what is the influence on how a person develops the key capacities associated with socially responsible leadership? Conversely, if trust is present, does it accelerate the development of social perspective-taking and leadership development?

Another assumption involves the tenet of controversy with civility and the intersection of privilege. The intentional space for differences of opinions to be expressed is applauded and necessary, particularly for minority identities, experiences, and views. However, it is not enough for minority voices to be *heard*, they must also be *felt*, *understood, honored*, and *amplified*. This is accomplished through social perspective-taking, which is a commitment to "recognize alternative perspectives and infer the thoughts and feelings of others" (Dugan et al., 2014, p. 3).

Without social perspective-taking, a group may lose the voice of differing identities, experiences, and views, resulting in groupthink (Alvarez, 2017) and allowing those with dominant voices to dictate the narrative. However, when social networking is factored into this equation it may increase the voice of those with minority identities, experiences, and views. The Pew Research Center found that 64% of Americans felt social networking sites provided a voice to underrepresented groups (Anderson, Toor, Rainie, & Smith, 2018). However, as has already been discussed, not all digital spaces are equivalent. Marginalized voices may encounter enriching spaces just as much as they encounter unhealthy or biased spaces. These differences are largely unaccounted for in research, making it difficult to understand how social networking engagement influences leadership development.

What Is Known About Fostering Socially Responsible Leadership?

Prior research demonstrates several predictors related to fostering socially responsible leadership. Given the breadth of leadership studies and the indefinite number of influences, it is not surprising for predictors to emerge that are vast in function. Predictors include the following:

- precollege experiences (Dugan, Bohle, Gebhardt, Hofert, Wilk, & Cooney, 2011; Dugan & Komives, 2010; Kezar & Moriarty, 2000);

- student involvement (i.e., community service, service immersions, retreats, positional leadership; Antonio, 2001; Astin, Keup, & Lindholm, 2002; Dugan & Komives, 2010; Kezar & Moriarty, 2000);

- racial group membership (i.e., collective racial esteem, importance of disaggregating racial group membership, interracial interaction, multicultural leadership programs; Dugan, Kodama, & Gebhardt, 2012; Dugan & Komives, 2010; Kezar & Moriarty, 2000);

- internships (Kezar & Moriarty, 2000);

- gender (Dugan & Komives, 2010; Kezar & Moriarty, 2000);

- curricular experiences (i.e., faculty interactions and mentoring, leadership course, capstone experience; Astin, 1993; Dugan & Komives, 2010);

- living-learning communities (Dugan & Komives, 2010); and

- formal leadership training programs (outdoor leadership programs, conferences, workshops; Dugan & Komives, 2010; Kezar & Moriarty, 2000).

It is important to note, however, that not all these predictors demonstrate positive relationships to fostering socially responsible leadership. Dugan and Komives (2010) found outdoor leadership programs, women's workshops, and living-learning communities to be negative predictors of socially responsible leadership.

Additionally, it is interesting to note that the influence of college environment on one's ability to partake in socially responsible leadership is typically connected not to an institutional structure (e.g., affiliation, size) but rather to individual experiences (Pascarella & Terenzini, 2005). This observation is critical for this research, as social networking experiences transcend institutional structures and are very much individual experiences, although influenced by the grander population (boyd & Ellison, 2007; Glazer-Raymo, 2016; Martínez-Alemán, 2014).

High Impact Practices and Socially Responsible Leadership

High impact practices are accepted by many institutions of higher education to assist in student retention and student engagement. These practices, by design, ask students to dedicate considerable time and effort to the experience, often exposing them to increased faculty and peer interaction, resulting in a more fruitful experience. High impact practices include, but are not

limited to sociocultural conversations, community service, involvement or leadership in student

organizations, involvement or leadership in off campus organizations, and mentoring (Kuh,

2008). More specifically Kilgo, Ezell Sheets, and Pascarella (2015) found statistical significance

of high impact practices on socially responsible leadership. These findings are important as

socially responsible leadership brings student experiences to life where both society and a

student find value in their intent (Kuh, 2008).

The Intersection of Social Networking and Leadership

The importance of technology, more specifically social networking, in leadership is growing

exponentially, exposing issues and creating opportunities for student leaders and those who

educate them (Cabellon & Brown, 2017). At the intersection of technology and socially

responsible leadership is eLeadership. eLeadership is defined as "a social influence process [that

produces] a change in attitudes, feelings, thinking, behavior, and/or performance with

individuals, groups, and/or organizations" (Avolio & Dodge, 2001, p. 617). Digital communities

require student leaders to effectively manage and influence groups in an online environment

rather than in person (Ahlquist, 2017; Cabellon & Brown, 2017). They ask student leaders to

look beyond themselves toward the betterment of others, channeling their passions for the

common good (Ahlquist, 2017). Doing so may result in a digitally aided movement, such as

Black Live Matter or Occupy Wall Street.

While social activism is not a new trend, especially on college campuses, what comes into

question is how social activism has been altered by social networking. A body of literature

around eLeadership certainly supports the efforts. However, they are not met without criticism.

Seventy-seven percent of Americans surveyed about online social movements feel that social

networking sites distract people from important issues, and 71% believe that social networking gives people a false affirmation that they are making a difference (Anderson et al., 2018). Owen once asked about social movements, "Do leaders create social movements or do the movements create leaders?" (Komives & Wagner, 2009, p. 35). Similarly, do eLeaders create social movements, or do the social movements create eLeaders? To study this more closely, it is important to understand three traits that identify a movement executed through social networking.

Traits of Digitally Aided Movements

Digitally aided movements are just that: they are mainly driven by digital technology, and more specifically by social networking sites (Gismondi & Osteen, 2017). The connections and relationships that social networking sites provide allow for quick connections to shared passions and causes (Aiken, 2016; Chen & Marcus, 2012; Gismondi & Osteen, 2017). Another defining characteristic of digitally aided movements is that they typically do not have a traditionally defined leader—that is, one person who is in charge.

However, as demonstrated through the social change model of leadership, modern definitions of leadership explicitly state that leadership is not always defined by a position or person (Komives & Wagner, 2009). Such is the case with digitally aided movements, as they are often non-hierarchical. Finally, digitally aided movements go through many phases of redevelopment and reconceptualization, as social networking provides avenues for critique and input (Gismondi & Osteen, 2017). Gismondi and Osteen (2017) highlighted that "social networking sites allow students to listen to each other, demonstrate their solidarity with each other, and lead with each other through activism" (p. 64). However, through this negotiation of purpose, it is important that

the movement does not lose its identity nor become too vague and lack actionable change (Gismondi & Osteen, 2017). Scholars acknowledge that a large group of activists coming together will undoubtedly have splintering views on the topic (Gismondi & Osteen, 2017) and conflict will arise, providing space to exercise controversy with civility. However, scholars fail to provide tangible ways for leaders engaging in eLeadership to learn these skills, nor do they identify the ways in which leadership development unfolds in these contexts.

Perhaps eLeadership is a skill best learned in practice. A survey by the Pew Research Center found that 67% of Americans believe social networking sites assist in creating social change movements (Anderson et al., 2018). Two prominent examples of these movements are Black Lives Matter and Occupy Wall Street. In these examples, technology strengthened the movement but also confused the central objectives, demonstrating the need to further investigate the influence of social networking on leadership development.

Summary

The review of literature covered in this chapter explored two prominent communication theories related to social networking: the social information processing theory and benign disinhibition. These theories provided a framework to explain the intentionality in selecting the categories of social networking frequency, social networking centrality, and social networking proficiency to frame the literature review, rather than reviewing specific technologies (e.g., Facebook, Snapchat), given that a plethora of new online communication technologies have been, and continue to be, developed.

Following the literature review on social networking, the chapter introduced the extant literature on social perspective-taking as it relates to leadership development and technology, as

online dialogues may look different than previously held in-person dialogues and may influence how we engage, empathize with, and understand one another (Sobieraj & Berry, 2011).

Pivoting to leadership development, the social change model of leadership was explained and critiqued in context of the previously discussed topics. The literature review concluded by discussing the scant research in which social networking and leadership intersect, focusing on eLeadership movements. Scholars have yet to deeply explore these topics (Baek et al., 2012; Papacharissi, 2004), potentially due to the recency of the topic coupled with the time needed to conduct quality research (Herbst, 2010). However, this reality cannot and should not discourage the study of such an important topic. The ideal cannot stand in the way of reality. The next chapter will discuss exactly how this study will accept the challenge of studying the fascinating intersection of social networking and socially responsible leadership.

CHAPTER 3

METHODOLOGY

This chapter details the methodology used to explore whether and how social networking influences a student's capacity for socially responsible leadership. First, the research questions are restated, building to my hypotheses. The study design follows, detailing both the Multi-Institutional Study of Leadership (MSL) instrument that operationalizes the research as well as specifics related to this research study. Next, the data plan discusses analytic procedures and the rationale of the chosen methods. Finally, a synopsis of limitations is presented.

Study Conceptual and Theoretical Framework

The conceptual framework was modeled after Astin's (1991) input-environment-outcome (I-E-O) model where key input and environmental measures are studied. The I-E-O model serves as a foundation for researchers and practitioners alike, validating the importance of pre-collegiate influences (i.e., input) and collegiate experiences (i.e., environment) on educational outcomes (i.e., outcome; Astin, 1993). Over time, higher education coined the term *student involvement* for collegiate experiences . The term continued to evolve and adopt its own nuances, often including the clubs or activities students engage with during college. This evolution diluted Astin's original intent. Astin (1993) referred to collegiate experiences as not only student involvement but also as *time on task*. Astin (1993) defined it as "the amount of physical and psychological time and energy the student invests" (p. 3).

The energy and time a student dedicates to their social networking experience may qualify it as a collegiate experience given Astin's (1993) definition. Seventy-four percent of students access Facebook at least once a day, with 51% indicating they access the site several times a day (Smith & Anderson, 2018). Snapchat, while representing fewer users, has a concentrated population of 18- to 24-year-old users. Eighty-two percent of 18- to 24-year-olds use Snapchat daily, with 71% indicating multiple logins per day (Smith & Anderson, 2018). Therefore, even though social networking use is not formally defined as a collegiate experience in the literature, the energy and time a student commits to their social networking experience creates a case to see it as a collegiate experience. Furthermore, higher education does not occur in a vacuum. Rather, students experience it in the context of their full lives, of which social networking is a critical component. As such, it is apropos to use a conceptual framework that further explores how this college experience influences outcomes, such as a college student's capacity for socially responsible leadership.

The conceptual framework uses a cross-sectional approach that captures pre-college data using retrospective pre-test questions (Dugan, 2015) that ask students to reflect on their then/now experiences. A cross-sectional approach is appropriate for this study as it mitigates the chance of response shift bias, a phenomenon where survey respondents may adjust longitudinal responses based on cognitive development (Howard, 1980; Howard & Dailey, 1979; Rohs, 2002; Rohs & Langone, 1997). For example, if a student is asked to rate their capacity to lead during their first year of college and then again in their fourth year, the student's cognitive understanding of what it means to lead may have changed, leaving the researcher unable to compare results and deduce

findings. By using a cross-sectional approach, the data capture the student's response using the same cognitive understanding of leading.

Research Questions

Emerging research indicates the potential influence social networking has on leadership education and experiences (Cabellon & Brown, 2017) and the opportunities it provides to build relationships for social good (Ahlquist, 2017). Despite these claims, there remains a dearth of evidence from large-scale studies to explore these relationships (Ahlquist, 2017; Baek et al., 2012; Papacharissi, 2004). As such, the purpose of this study is to examine to what extent, if any, social networking influences college students' capacities for socially responsible leadership. More specifically, this study analyzed the following questions

- To what extent, if any, does social networking **frequency** influence college students' capacities for socially responsible leadership?

- To what extent, if any, does social networking **proficiency** influence college students' capacities for socially responsible leadership?

- To what extent, if any, does social networking **centrality** influence college students' capacities for socially responsible leadership?

Additionally, research supports the importance of social perspective-taking as an intermediate outcome in building leadership capacity (Johnson et al., 2017). This influence stems from the critical role of social perspective-taking in shaping individuals' understandings of themselves in the context of and through engagement with others (Galinsky et al., 2005; Johnson, 1975). Engagement with others is heightened through social networking (boyd &

Ellison, 2007; Glazer-Raymo, 2016; Martínez-Alemán, 2014), suggesting there may be an important link between social networking and social perspective-taking in the leadership development process. However, research at the intersection of social networking and social perspective-taking is scant (Ahlquist, 2017; Baek et al., 2012; Papacharissi, 2004). Therefore, this study also explored the following question:

- To what extent, if any, does the inclusion of **social perspective-taking** as an intermediate outcome shape the influence of social networking on college students' capacities for socially responsible leadership?

As technology becomes more prevalent in life and learning (Junco, 2014), these questions attempt to expand the knowledge base regarding college student leadership development as it relates to social networking.

Hypotheses

The lack of extant literature (Ahlquist, 2017; Baek et al., 2012; Junco, 2014; Papacharissi, 2004) discussing these research questions allows for an overwhelming number of hypotheses to be proposed. Given that the intent of this research is to broadly inform and advance current literature on the topic, the alternate hypotheses were approached in an exploratory fashion. The null hypotheses were

(1) There is no relationship between social networking **frequency** and a college student's capacity for socially responsible leadership.

(2) There is no relationship between social networking **proficiency** and a college student's capacity for socially responsible leadership.

(3) There is no relationship between social networking **centrality** and a college student's capacity for socially responsible leadership.

(4) There is no relationship between **social perspective-taking**, as an intermediate outcome, and a college student's capacity for socially responsible leadership.

In the case of the alternate hypotheses, the literature review identified cases where results contradicted one another among the limited extant research. This surfaced tensions in understanding the influences of social networking. To make any claim other than the null hypotheses would be irresponsible, as it would be informed by limited studies and my personal perspective on how and why social networking may influence leadership development. To avoid this and honor the exploratory nature of this research, I chose to use the null hypotheses, allowed for results to emerge, and conducted the necessary post-hoc analyses to help contextualize and understand results. As such, the alternate hypotheses were

(1) There is a relationship between social networking **frequency** and a college student's capacity for socially responsible leadership.

(2) There is a relationship between social networking **proficiency** and a college student's capacity for socially responsible leadership.

(3) There is a relationship between social networking **centrality** and a college student's capacity for socially responsible leadership.

(4) There is a relationship between **social perspective-taking**, as an intermediate outcome, and a college student's capacity for socially responsible leadership.

Study Design

This quantitative, cross-sectional study used data collected as part of the 2018 Multi-Institutional Study of Leadership (MSL), an international research program that explores the influence and experiences of college students on leadership development. Specifically, the study uses questions from the MSL 2018 questionnaire that assess frequency, proficiency, and centrality of social networking among college students. These data provide a bridge to examine influences of social networking on socially responsible leadership capacity. The following section outlines the overarching MSL research study. This is followed by study design considerations unique to the research for this study.

Multi-Institutional Study of Leadership

MSL conceptual and theoretical frame. The MSL uses an online questionnaire to measure core values associated with leadership development, using an adapted version of Astin's (1991) I-E-O model as the conceptual framework and the social change model of leadership (Higher Education Research Institute, 1996) as the theoretical framework. Astin (1991) proposed the I-E-O model after analyzing data collected in a longitudinal, pre/post-test study comprised of over 200 students at four-year institutions. These data demonstrated the importance of connecting pre-collegiate influences and collegiate experiences to educational outcomes (Astin, 1993). Astin's (1993) framework has provided the basis for countless college impact studies attempting to understand the unique influences of experiences during college on educational outcomes such as leadership development.

The social change model of leadership (Higher Education Research Institute, 1996) introduces "equity, social justice, self- knowledge, personal empowerment, collaboration,

citizenship, and service" (p. 18) and focuses on two main outcomes: (a) developing self-knowledge and leadership competence in students and (b) assisting in the creation of positive social change in the community, society, or world (Higher Education Research Institute, 1996). These outcomes are achieved through seven tenets housed within three domains (i.e., self, group, and society; Higher Education Research Institute, 1996). At the nucleus of the MSL is the measurement of socially responsible leadership, operationalized using the Socially Responsible Leadership Scale (SRLS; Tyree, 1998).

MSL instrument. The MSL instrument has seven core scales (i.e., campus climate, cognitive skills, leadership efficacy, mentoring, social change behaviors, socially responsible leadership, sociocultural conversations) as well as four sub-studies (i.e., collective racial esteem, mentoring, social perspective-taking, spirituality). Additionally, the MSL collects demographics, pre-college experiences, and college experiences.

The MSL was first released in 2006 and has experimented with an annual as well as a three-year cycle of implementation. Currently in its seventh iteration, the instrument continues to be refined each cycle. Of key importance to this research study are the fourth (i.e., 2009) and seventh (i.e., 2018) iterations. During the fourth iteration, the validity of the SRLS measure was tested with two primary goals: (a) to reduce the number of items in the SRLS and (b) to advance the psychometric rigor of its measurement. Results included a reduction of total items (to 34 items), the removal of the common purpose scale, and validation of the original model, with reliability ranging from .82 to .90 (Dugan, 2015). The seventh and most recent iteration, in 2018,

added social networking items to analyze the frequency, proficiency, and centrality of social networking among college students.

MSL data collection and sample. In 2018, 78 colleges and universities participated in the MSL, including institutions from the United States of America, Canada, Mexico, Chile, and Australia. Table 1 below details the diverse make-up of United States institutions in the 2018 cycle, as this study focused only on United States institutions given the cultural contingency of both leadership and social networking.

Table 1. Institutional Composition of 2018 MSL Participation

Category	Number of Schools
Public	40
Private	31
Religiously affiliated	20
Non-affiliated	51
< 4,999 students	13
5,000–9,999 students	17
10,000–19,999 students	15
20,000+ students	26
Less competitive	4
Competitive	18
Very competitive	15
Highly competitive	14

Most competitive	14
Unclassified	6

Data were collected online between January 2018 and April 2018. Using a desired confidence level of 95%, a confidence interval of +3, and oversampling at a rate of 70%, institutions were asked to provide a random sample of 4,000 undergraduate students. For institutions with less than 4,000 students, the full population was sampled. The total sample size for the national data set was 256,289 cases. The national response rate was 29%, which is on par with the 30% response rate expected from web-based research (Couper, 2000; Crawford et al., 2001). The total number of completed cases totaled 54,430. To answer the questions posed by this research, 14,564 cases were used. The national IRB was housed at Loyola University Chicago and had human subjects approval.

Study Instrument

Variables were organized into five blocks for analysis. Figure 1 details the conceptual model and variables. Independent variables drew from previous research focused on socially responsible leadership, social perspective-taking, and social networking. Input variables include gender and racial group membership. The collegiate experience is comprised of the proficiency, frequency, and centrality of social networking in students' collegiate experiences.

As previously mentioned, the seventh iteration of the MSL introduced social media measures. Social media questions were developed to support this research but also to provide valuable information for participating schools, hence the development of more general social *media* measures, not focused social *networking* measures. Otherwise stated, the researchers

framed the scale to be broad and, therefore, more applicable for use beyond this research study while also addressing the needs of the researcher for this study.

To implement these scales, the researcher conducted thorough literature reviews on social media to identify existing scales and capture important themes. The researcher then created measures with the principal investigator that were embedded in the 2018 data collection, including proficiency, frequency, and centrality. As part of the initial analytic protocol for this study, all newly created scales were tested for their psychometric rigor.

For proficiency, students were asked to measure how capable they perceived themselves to be with four types of social media (i.e., social networking, live-stream apps that delete content, anonymous social media apps, messaging apps) using a Likert scale ranging from 0 (*not at all proficient*) to 4 (*expert*). For frequency, students were asked to report how often they used the same four types of social media using a scale ranging from 0 (*never*) to 5 (*multiple times per day*). Both proficiency and frequency provided a response category that did not presume any engagement.

Finally, to gauge how integrated social networking had become in a respondent's daily activities (i.e., centrality), six statements were presented using a Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The following statements were presented in order to explore emotional connection and integration of social networking:

(1) Using social media is part of my everyday activity.

(2) I'm proud to tell people I'm on social media.

(3) Engaging on social media has become part of my daily routine.

(4) I feel out of touch when I haven't logged onto social media for a while.

(5) I feel like I'm part of a community on the social media platform that I use most frequently (e.g., Twitter, Facebook, Snapchat, Instagram).

(6) I'd feel sorry if my primary social media platform shut down (e.g., Facebook, Twitter, Snapchat, Instagram).

These statements were modeled on and broadened from a scale that focused solely on Facebook developed by Ellison et al. (2007). The reliability of Ellison et al.'s (2007) scale, the Facebook Intensity Scale, was .83 in prior research.

A correlation matrix was run resulting in several coefficients with values at or above .3 indicating that factor analysis is appropriate.

Table 2. Correlation Matrix

Correlation Matrix

		SMUCON1: Using social media is part of my everyday activity - Please select the response option that best represents how you feel.	SMUCON2: I'm proud to tell people I'm on social media - Please select the response option that best represents how you feel.	SMUCON3: Engaging on social media has become part of my daily routine - Please select the response option that best represents how you feel.	SMUCON4: I feel out of touch when I haven't logged onto social media for awhile - Please select the response option that best represents how you feel.	SMUCON5: I feel like I'm part of a community on the social media platform that I use most frequently (e. g., Twitter, Facebook, Snapchat, Instagram) - Please select the response option that best represents how you feel.	SMUCON6: I'd feel sorry if my primary social media platform shut down (e.g., Facebook, Twitter, Snapchat, Instagram) - Please select the response option that best represents how you feel.
Correlation	SMUCON1: Using social media is part of my everyday activity - Please select the response option that best represents how you feel.	1.000	.592	.790	.551	.523	.479
	SMUCON2: I'm proud to tell people I'm on social media - Please select the response option that best represents how you feel.	.592	1.000	.618	.514	.601	.511
	SMUCON3: Engaging on social media has become part of my daily routine - Please select the response option that best represents how you feel.	.790	.618	1.000	.623	.593	.525
	SMUCON4: I feel out of touch when I haven't logged onto social media for awhile - Please select the response option that best represents how you feel.	.551	.514	.623	1.000	.665	.644
	SMUCON5: I feel like I'm part of a community on the social media platform that I use most frequently (e.g., Twitter, Facebook, Snapchat, Instagram) - Please select the response option that best represents how you feel.	.523	.601	.593	.665	1.000	.639
	SMUCON6: I'd feel sorry if my primary social media platform shut down (e.g., Facebook, Twitter, Snapchat, Instagram) - Please select the response option that best represents how you feel.	.479	.511	.525	.644	.639	1.000

Additionally, the KMO is above .6 and the test for sphericity is significant indicating that factor

analysis is appropriate.

Table 3. KMO and Bartlett's Test

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.864
Bartlett's Test of Sphericity	Approx. Chi-Square	51250.729
	df	15
	Sig.	.000

Using Kaiser's criterion there is one component/ factor with an eigenvalue over 1.0. This would

indicate that we should extract one component. This would explain a total variance of 59.3%.

Table 4. Total Variance Explained

Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.960	66.004	66.004	3.558	59.304	59.304
2	.702	11.705	77.709			
3	.476	7.926	85.635			
4	.358	5.974	91.610			
5	.302	5.036	96.646			
6	.201	3.354	100.000			

Extraction Method: Principal Axis Factoring.

The Scree plot supports the extraction of a single component/ factor as you only take factors that

appear above the elbow of the plot.

Figure 2. Scree Plot
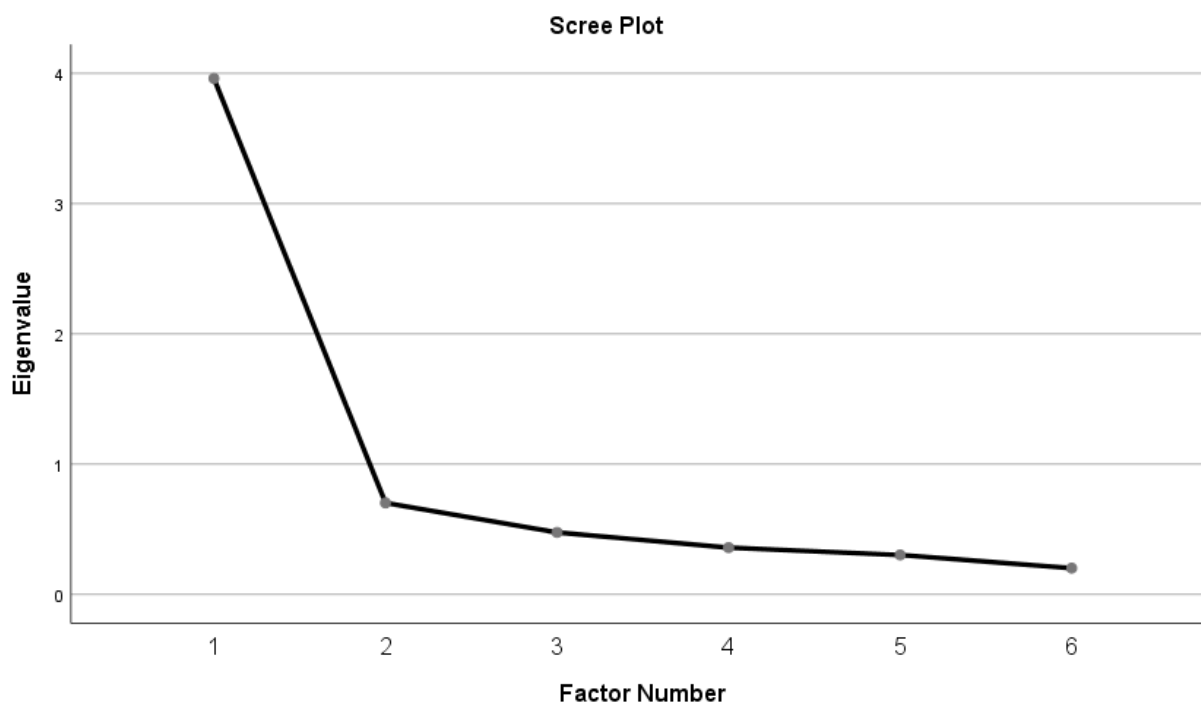
From a cognitive perspective, social perspective-taking is a multi-dimensional, higher-level

cognitive function (Gehlbach, 2004), with social connections having a critical role in one's

capacity for socially responsible leadership (Galinsky et al., 2008; Johnson, 1975). Social

networking may alter the way individuals obtain, process, and disseminate cognitive information

(Avolio & Kahai, 2003) while social networking is used to interact, collaborate, and teach (Gikas

& Grant, 2013). Therefore, the intermediate outcome of social perspective-taking was included

in the conceptual model to study this juxtaposition. Social perspective-taking measures include

three items on a Likert scale ranging from 1 (*does not describe me well*) to 5 (*describes me very*

well). Reliability estimates were .85 in prior research (Dugan et al., 2014).

Socially responsible leadership was measured using a modified version of the SRLS (Tyree, 1998), with participants responding to SRLS items on a continuum from 1 (*strongly disagree*) to 5 (*strongly agree*). The SRLS has withstood the rigor of numerous studies and pilot testing demonstrating strong reliability and validity (Dugan, 2015). The original SRLS has eight scales measuring each element of the social change model as well as change. During the fourth iteration of the MSL, the validity of the SRLS measure was tested, resulting in a reduction of items (to 34 items), the removal of the common purpose scale, and validation of the original model, with reliability ranging from .82 to .90 (Dugan, 2015).

Data collection and sample. Research suggests students with more collegiate experience are better able to accurately report on their experiences, and seniors demonstrate more growth in social perspective-taking than other college students (Dey et al., 2010; Johnson et al., 2017). Therefore, to best capture perceived development throughout college and use a conservative approach (Dugan, 2015), only students with the class standing of senior (i.e., 4th year and beyond) were used for this study. The analysis does not include graduate students.

Please refer to Chapter 1, Figure 1 for a visual depiction of the framework. The first block of variables includes two input variables: gender and racial group membership. Gender and racial group membership are included as inputs based on previous research demonstrating that gender and racial group membership may influence social perspective-taking and leadership development in college students (Dugan, Fath, Howes, Lavelle, & Polanin, 2013; Dugan et al., 2012; Johnson et al., 2017; Kodama & Dugan, 2013). As such, this study disaggregates these variables to expand upon this finding. There was not sufficient data to include a non-binary

approach to gender analysis; therefore, gender is treated as a dichotomous variable in the statistical model. Similarly, the integration of racial group membership is intended to be as inclusive and expansive as the data allowed. The MSL includes indicators for White/Caucasian, Middle Eastern/Northern African, African American/Black, American Indian/Alaska Native, Asian American, Native Hawaiian/Pacific Islander, Latinx/Hispanic, Multiracial, and Race Not Listed. These variables were dummy coded with White as the reference variable. The goal was to retain as many of the categories as viable based on representation in the sample.

The second block is the pretest for the outcome measure of the six socially responsible leadership capacities (i.e., consciousness of self, congruence, commitment, collaboration, controversy with civility, citizenship). The quasi pretest scale used Likert responses (i.e., 1 = *strongly disagree,* 2 = *disagree,* 3 = *neutral,* 4 = *agree,* 5 = *strongly agree*) to statements such as "I held myself accountable for responsibilities I agreed to." This scale is used widely in other MSL-related research, demonstrating sound reliability and validity. Pretest reliability estimates in studies using MSL data range between .71 and .77 (Dugan et al., 2011; Dugan et al., 2013). Reliability estimates were calculated for the final sample and Appendix B provides a complete list of all pretest items.

The third block includes college experience variables involving social networking. Social networking frequency (SMU) asked students to respond to the question, "How often do you use each of the following forms of technology/social media?" with the following scale options: 0 = *never,* 1 = *rarely,* 2 = *monthly,* 3 = *weekly,* 4 = *daily,* and 5 = *multiple times per day*. For this study, the researcher only analyzed SMU1, which includes social networking sites (e.g.,

Facebook, Twitter, LinkedIn, Instagram). Social networking proficiency (SMUPRO) asked students to respond to the question, "How proficient would you say you are with using each of the following forms of technology/social media?" using a scale ranging from 0 (*not proficient at all*) to 4 (*expert*). For this study, the researcher only analyzed SMUPRO1, which includes social networking sites (e.g., Facebook, Twitter, LinkedIn, Instagram). Social networking centrality (SMUCON) used a six-item scale consisting of items such as "I feel like I'm part of a community on the social media platform that I use most frequently (e.g., Twitter, Facebook, Snapchat, Instagram)." Responses were gathered using a Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The researcher used all six items in this scale.

The intermediate outcome variable, social perspective-taking, was measured using a three-item Likert response scale. Likert responses ranged from 1 (*does not describe me well*) to 5 (*describes me very well*) and were dummy coded for this study. Questions sought to explore the student's ability to look at a situation through a differing point of view and accurately infer the thoughts and feelings of another. For example, one statement asked students to reflect on whether they "regularly thought about how different people might view situations differently."

Data Analysis Plan

For this study, data from 74 institutions was used, omitting data from Canada, Mexico, Chile, and Australia as well as institutions that did not provide a random sample. Data was cleaned to ensure data integrity using the following procedures:

- Cases where students completed less than 90% of the survey were removed to increase accuracy.

- International students were omitted from the sample given cultural variation around the intermediate and outcome variables.

- Only students who identified as seniors (4 = 4th year and beyond) were retained in the sample.

- Sample numbers were generated for race in hopes of including White/Caucasian, Middle Eastern/Northern African, African American/Black, American Indian/Alaska Native, Asian American, Native Hawaiian/Pacific Islander, Latinx/Hispanic, and multiracial races. Cases where respondents selected "Race Not Listed" were omitted given the parameters of study.

- Sample numbers were generated for gender in hopes of including genderqueer/gender nonconforming/nonbinary, man, questioning/unsure, transgender, and woman. Cases where respondents selected "Preferred Response Not Listed" were omitted given the parameters of the study.

From there, basic analyses were run using the software package SPSS to verify that all existing scales maintained reliability. Additional analyses were run to establish a baseline of psychometrics for the new social networking scales introduced in the seventh iteration. This included factor analysis to determine whether scales held together appropriately. The researcher analyzed the research questions by running and interpreting multiple regressions to reveal the relationship between the predictor variable and each predicted variable (Adams, 2015). All analyses ensured that foundational assumptions associated with the analytic procedure were met.

Limitations

MSL Instrument Limitations

The MSL uses a quasi-pretest, cross-sectional approach rather than a longitudinal approach. While this may be problematic in some studies (Astin & Lee, 2003), in studies that measure cognitive functions (e.g., leadership) it is more appropriate to use a cross-sectional approach (Dugan, 2015). By using such a technique, the survey avoids response shift bias, a phenomenon where survey respondents may adjust longitudinal responses based on cognitive development (Howard, 1980; Howard & Dailey, 1979; Rohs, 2002; Rohs & Langone, 1997); however, it is not a true longitudinal study. Astin and Lee (2003) take caution by using a cross-sectional design to measure college impact instead of a longitudinal design, as the lack of time may negate the ability to establish a proper baseline for measuring growth.

Additionally, there is concern around self-report data regarding issues of social desirability, the halo effect, and item format. Social desirability is when a respondent alters their response based on how they perceive others would like them to answer (Bowman & Seifert, 2011; Gonyea, 2005; Herzog & Bowman, 2011; Porter, 2011). To combat social desirability, this research used only students who identified as seniors or above, as research indicates that students later in their college career demonstrate a lower need for social desirability (Bowman & Hill, 2011). The halo effect and clarity of measures is an issue of interpretation where students may be influenced by perceptions or generalize items that require specificity. Suggested approaches for addressing this issue have been meticulously implemented in the MSL instrument, mainly with regard to the clarity of measures. The MSL is a lengthy survey that the average student takes 25 minutes to complete. The length allows for clarity and dissection of terms. Notably, the items

within the SRLS do not use the term *leadership* to avoid a misinterpretation of the term. Finally, the MSL properly addresses issues around item format by not asking students to measure their own gains, offering response options that do not presume any level of impact, and presenting questions where respondents can realistically recall information (Dugan, 2015).

Research Study Limitations

This research study also presents limitations that must be considered. First, technology is a dynamic topic, with new technology constantly being developed and existing technology being phased out. Therefore, the measures developed for this study had the potential to be outdated before the survey was even released. This constant evolution, coupled with a delay in publishing peer-reviewed articles, can present challenges when attempting to conduct a thorough literature review. To combat this issue, the measures directly relating to use of technology (i.e., frequency and proficiency) were given generic descriptions (e.g., social networking), with examples (e.g., Facebook, Twitter, LinkedIn, Instagram) rather than specific platforms being named as response options. While this approach may create issues such as a halo effect, the degree of specificity is not critical to draw conclusions but should be considered when reviewing results.

The reductionist nature of quantitative research can be problematic as it may exclude identities due to small sample sizes (e.g., Native Hawaiian/Pacific Islander) or restrict the fluidity involved in other identities (e.g., gender). Additionally, quantitative research limits the ability to examine identities from an intersectional perspective. Even with a large data set, it was necessary to remove populations from the sample that produced small sample sizes. This does not imply that studying marginalized populations is not important, but simply that results must be reduced

to provide statistical accuracy. This was a clear limitation associated with the design of this exploratory study.

As an exploratory study, this research examines the relationships between social networking and college student leadership development. Many college student leadership studies point to a large number of typical predictors of educational gains. Although important, those preexisting variables of influence were not included in this research. This research aims to provide a baseline and reference point for future research by establishing whether there is any relationship to explore further between social networking usage and leadership development. Thus, a limitation of the study is that the study purposefully excludes previously identified predictors of leadership development. This is intentional, as the study is exploratory and removing these predictors provides clarity on the influence of social networking. To mitigate this limitation, post hoc analysis did allow for high-impact practices to be included, thus strengthening the overall study and explaining variance.

This study looks at how people engage in socially responsible leadership in its entirety (i.e., online and in person). Results do not disaggregate engagement in socially responsible leadership online and in person. The intention was to capture the whole being, assuming some level of congruence between the way one acts online and in person.

In analyzing results, it appeared that having information on the amount of time an individual spent on social networking and for what purpose (e.g., professional, social, educational) could assist in explaining findings; however, these questions were not asked on the survey. While adding these questions might have been helpful, they might also contribute to survey fatigue as

the current survey is lengthy, and the information gleaned from what was asked still moves the research forward.

Ordinary least squares (OLS) regression techniques were used instead of multilevel modeling even though data were nested, based on decision-making criteria detailed by Astin and Denson (2009) and Niehaus, Campbell, and Inkelas (2014). Additionally, earlier MSL studies that used similar variables did not yield significant between institution differences when models were run using both OLS and multilevel techniques (Dugan & Associates, 2012; Dugan, et al., 2013; Dugan, et al., 2012). To alleviate any concerns, interclass correlation (ICC), which serve as an indicator of between-group differences, were calculated for each of the outcome scales and detailed in Table 5.

Table 5. Inter-class correlations

Scale	ICC
Consciousness of Self	.03
Congruence	.02
Commitment	.02
Collaboration	.02
Controversy with Civility	.02
Citizenship	.04

Scholars have found that lower ICC levels imply a decreased likelihood that differences will present between OLS and multilevel techniques (Hancock & Mueller, 2010; Woltman, Feldstain,

MacKay, & Rocchi, 2012). This approach is consistent with other higher education research studies (e.g., Cole, 2011; Cox, McIntosh, Reason, & Terenzini, 2011; Ethington, 1997; Mayhew, Seifert, & Pascarella, 2012). Additionally, to further address concerns regarding the underestimated standard errors and Type I errors that can arise from analysis of nested data using OLS, more conservative p values ($p < .01$) were used (Gelman & Hill, 2007).

Summary

This study was designed to explore to what extent, if any, the frequency, proficiency, and centrality of social networking influences college students' capacities for socially responsible leadership. Furthermore, this study was designed to explore to what extent, if any, social perspective-taking contributes to college students' capacities for socially responsible leadership while engaging in social networking. This chapter presented an overview of the study design, data analysis plan, and limitations of this study. Using data collected through the 2018 MSL instrument, a secondary analysis using multiple regressions with variables grounded in previous research and the presented conceptual framework was executed.

CHAPTER 4

RESULTS

The purpose of this chapter is to summarize the results from multiple regression models calculated to examine to what extent, if any, social networking influences college students' capacities for socially responsible leadership. More specifically, the models examined the following questions:

- To what extent, if any, does social networking **<u>frequency</u>** influence college students' capacities for socially responsible leadership?

- To what extent, if any, does social networking **<u>proficiency</u>** influence college students' capacities for socially responsible leadership?

- To what extent, if any, does social networking **<u>centrality</u>** influence college students' capacities for socially responsible leadership?

This study also explored social perspective-taking as an intermediate outcome:

- To what extent, if any, does the inclusion of **<u>social perspective-taking</u>** as an intermediate outcome shape the influence of social networking on college students' capacities for socially responsible leadership?

This chapter will detail the results from the research study. Given the large sample size, the significance of individual variables within the overall model was interpreted at a more conservative .01 level. The chapter is organized to first present the pre-analysis of data, then present results for each model: basic, intermediate, and full range. The full-range model will also include post hoc analyses. Finally, a summary will highlight the key findings from the chapter.

Pre-analysis of Data

Most scales employed in this research underwent extensive psychometric evaluation. This research introduced a new composite measure for social networking usage (i.e., centrality) along with two single-item indicators of social networking frequency and proficiency of use. Exploratory factor analysis using principal component extraction was used to establish the appropriateness of the centrality scale. Results indicated a single component solution that explained 66% of the total variance. The Cronbach's α level was .90 for the measure. Factor loadings for individual items that comprise the scale are reported in Appendix C.

Given the exploratory nature of this study, an in-depth validation of scales was not conducted. However, correlations were calculated to examine the degree of relationship between the centrality composite measure and the two single-item measures (i.e., frequency and proficiency) of social networking. The centrality scale had a significant, positive correlation ($r = .66$) with social networking frequency and a significant, positive correlation ($r = .53$) with social networking proficiency. The single-item indicators of frequency and proficiency also demonstrate a significant, positive correlation ($r = .57$). This indicates that all three measures were related but suggests that they are not so related that they are measuring the same concept.

Results

To answer the three primary research questions, multiple regression models were calculated to understand the unique contributions of centrality, frequency, and proficiency in shaping leadership outcomes. Models were calculated including a basic model incorporating demographics, pretest measures, and social networking blocks to respond to the first research question. An intermediate model followed to include social perspective-taking as a block to examine its role as an intermediate outcome variable. A full-range model was calculated after post hoc analyses were conducted to better

contextualize the relative contribution of social networking to leadership development. Given the large sample size, the significance of individual variables within the overall model was interpreted at a more conservative .01 level.

Basic Model

The first wave of analyses involved running basic multiple regression models for each outcome measure (i.e., consciousness of self, congruence, commitment, collaboration, controversy with civility, and citizenship). These models incorporated three blocks (i.e., demographics, pretest measures, and social networking usage) to examine the unique contributions of independent variables toward explaining the outcome measures. Prior to analyses, diagnostics were run to ensure multicollinearity was not present. Multicollinearity occurs when independent variables in a regression model overlap in predictive power (Tabachnick & Fidell, 2007).

All assumptions required to meet the standards for multiple regression analyses were met for the basic models. There were no indicators of multicollinearity. The variance inflation factor (VIF), which should not exceed 10 (Pallant, 2007), did not exceed 2.02. Tolerance levels, which should be no lower than .10 (Pallant, 2007), were also appropriate, with the lowest value being .49. Appropriate levels of correlation were present among all variables in the model as well. Table 6 provides a summary of the relative variance explained by the social networking block as well as the total variance explained across all dependent outcome measures.

Table 6. Summary of Relative Variance for Basic, Intermediate, and Full-Range Models

Outcomes/R^2 Change	Basic	Intermediate	Full-Range
Consciousness of Self			
SMU Block	.04	.04	.04
Total Model	.16	.22	.25
Congruence			
SMU Block	.02	.02	.02
Total Model	.17	.25	.28
Commitment			
SMU Block	.03	.03	.03
Total Model	.17	.25	.27
Collaboration			
SMU Block	.04	.04	.04
Total Model	.20	.33	.37
Controversy with Civility			
SMU Block	.03	.03	.03
Total Model	.15	.35	.40
Citizenship			
SMU Block	.03	.03	.03
Total Model	.16	.25	.40

Across the six regression calculations for the basic model, results explained between 15% and 20% of the total variance in students' outcome scores. Calculation for each model were as follows:

consciousness of self (R^2 = .16, adjusted R^2 = .16, F[3, 14,190], p < .001); congruence (R^2 = .17,

adjusted R^2 = .17, F[3, 14,216], p < .001); commitment (R^2 = .17, adjusted R^2 = .17, F[3, 14,225], p <

.001); collaboration (R^2 = .20, adjusted R^2 = .20, F[3, 14,213], p < .001); controversy with civility (R^2

= .15, adjusted R^2 = .15, F[3, 14,218], p < .001); and citizenship (R^2 = .16, adjusted R^2 = .16, F[3,

14,211], p < .001).

The demographic block explained a limited proportion of variance; since demographics were not

the primary variable of influence, detailed results are only explained for the basic model on the

outcome of citizenship in regard to demographics. This is because the relative contribution of

demographics in the citizenship model was 3%. Among the independent variables comprising the

demographic block, the following demonstrated significance and contributed to the variance

explained: identification as African American/Black (β = .03; p < .001), identification as Latinx (β =

.03; p < .001), and gender identification as a woman (β = .11; p < .001).

The pretest for leadership capacity contributed significantly to each of the models, explaining

between 10% and 16% of the variance across the dependent measures. The block representing social

networking was also significant across the basic models, explaining between 2% and 4% of the

variance. The social networking contribution was conservatively entered into the model in the final

block; however, it still explained a meaningful proportion of variance across outcomes.

Intermediate Model

The second wave of analyses involved running multiple regression models for each outcome

measure (i.e., consciousness of self, congruence, commitment, collaboration, controversy with

civility, and citizenship), but incorporating four blocks (i.e., demographics, pretest, social

networking, and social perspective-taking) to examine the unique contributions of adding the

intermediate outcome of social perspective-taking. Per the rationale in the conceptual framework and

the prior literature covered in Chapter 2, social perspective-taking was added as the final block of the model given the role of social networking in shaping perspective-taking, and in turn, of social perspective-taking in shaping leadership outcomes.

All assumptions required to meet the standards for multiple regression analyses were met. There were no indicators of multicollinearity. The VIF did not exceed 2.03. Tolerance levels were also appropriate, with the lowest value being .49. Appropriate levels of correlation were present among all variables in the model.

Table 6 above provides a summary of the relative variance explained by the social networking block as well as the total variance explained across all dependent outcome measures. The table also reflects the relative variance explained by the social networking block. This provides a comparison between the relative contribution of the social networking block in the basic versus the intermediate model as well as the total variance explained across models.

Across the six regression calculations for the intermediate model, results explained between 22% and 35% of the total variance in students' outcome scores. Calculations for each model were as follows: consciousness of self (R^2 = .22, adjusted R^2 = .22, F[1, 14,189], p < .001); congruence (R^2 = .25, adjusted R^2 = .25, F[1, 14,215], p < .001); commitment (R^2 = .25, adjusted R^2 = .25, F[1, 14,224], p < .001); collaboration (R^2 = .33, adjusted R^2 = .32, F[1, 14,212], p < .001); controversy with civility (R^2 = .35, adjusted R^2 = .35, F[1, 14,217], p < .001); and citizenship (R^2 = .24, adjusted R^2 = .24, F[1, 14,210], p < .001).

The demographic block explained a limited proportion of the variance, and because this was not the primary variable of influence, only the detailed results for the intermediate model on the outcome of commitment and citizenship are explained. This is because the relative contribution of demographics in these outcomes were 2% and 3%, respectively. Among the independent variables

comprising the demographic block, the following demonstrated significance and contributed to the variance explained for commitment: identification as African American/Black ($\beta = -.03$; $p < .001$), identification as Asian ($\beta = -.06$; $p < .001$), and gender identification as a woman ($\beta = .07$; $p < .001$). The following demonstrated significance and contributed to the variance explained for citizenship: identification as African American/Black ($\beta = .02$; $p < .01$) and gender identification as a woman ($\beta = .09$; $p < .001$).

The pretest for leadership capacity again contributed significantly to each of the models, explaining between 10% and 16% of the variance across the dependent measures. The block representing social networking was also significant across all intermediate models, explaining between 2% and 4% of the variance. Note that the social networking usage block represented a similar proportion in the intermediate model as in the basic model, retaining its relative explanatory value. The block representing social perspective-taking as an intermediate outcome added a significant and positive contribution to the model, contributing between 6% and 21% to the total variance explained.

Full-Range Model

Given the exploratory nature of this research and the lack of prior evidence to support hypotheses, post hoc analyses were conducted to better contextualize the relative contribution of social networking to leadership development. Given that the variance explained by social networking retained its potency in both the basic and intermediate models, the decision was made to see if potency would continue to be retained with the addition of a block representing high-impact practices for leadership development. Per Chapter 2, the leadership literature established a core set of seven factors that are identified as high-impact practices influencing socially responsible leadership capacity (Dugan, 2011a; Dugan, 2011b). This post hoc analysis provides a critical window into the

degree to which social networking retains its importance and influence in shaping outcomes even in the context of the most critical factors known to influence leadership development. This model is referred to as the full-range model given its inclusion of all previously identified high-impact practices influencing leadership development. High-impact practices are inserted as a block following social networking, given that the literature covered in Chapter 2 established that students enter the collegiate environment already engaged in social networking and that social networking likely impacts their experiences within the environment (Ahlquist, 2017; boyd & Ellison, 2007; Cabellon & Brown, 2017; Junco, 2014). Variables associated with the high-impact practices block are detailed in Chapter 3.

All assumptions required to meet the standards for multiple regression analyses were met. There were no indicators of multicollinearity. The VIF levels did not exceed 2.30. Tolerance levels were also appropriate, with the lowest value being .44. Appropriate levels of correlation were present among all variables in the model as well.

Table 6 provides a summary of the total variance explained for this full-range model across all dependent outcome measures. The table also reflects the relative variance explained by the social networking block. This provides a comparison between the relative contribution of the social networking block in the basic and the intermediate models while adding the full-range model. The table also highlights the increase in total variance explained across outcomes through the full-range model.

Across the six regression calculations for the full-range model, results explained between 25% and 40% of the total variance in students' outcome scores. Calculations for each model were as follows: consciousness of self (R^2 = .25, adjusted R^2 = .25, F[1, 14,038], $p < .001$); congruence (R^2 = .28, adjusted R^2 = .28, F[1, 14,061], $p < .001$); commitment (R^2 = .27, adjusted R^2 = .27, F[1,

14,061], $p < .001$); collaboration ($R^2 = .37$, adjusted $R^2 = .36$, $F[1, 14,061]$, $p < .001$); controversy with civility ($R^2 = .40$, adjusted $R^2 = .40$, $F[1, 14,061]$, $p < .001$); and citizenship ($R^2 = .39$, adjusted $R^2 = .39$, $F[1, 14,058]$, $p < .001$).

Given (a) the robustness of the full-range model in terms of total variance explained across outcomes, (b) the retention of social networking as a consistent, value-added, meaningful contribution to the models, and (c) the degree to which these results expand the scope of the exploratory study and the practical utility of the findings for educators, the full-range model was selected as the basis for detailed analyses and interpretations. Table 7 provides a summary of the final block across each of the outcomes.

Table 7. Full-Range Model

	Consciousness of Self			
	B	β	p	Significance
Demographics				
White/ Caucasian	1.82		.00	***
African American/ Black	-.02	-.01	.37	
Asian American	-.15	-.07	.00	***
Latinx/ Hispanic	-.03	-.01	.17	
Multiracial	-.04	-.02	.00	***
Gender	-.01	-.01	.21	
R^2 **Change**	**.01**			
Pretest				
Pre-test for Omnibus SRLS	.27	.25	.00	***
R^2 **Change**	**.12**			
Social Networking				
Frequency	.01	.01	.19	
Proficiency	.09	.13	.00	***
Centrality	.00	.00	.69	
R^2 **Change**	**.04**			
Collegiate Experiences				
Socio-Cultural Conversations	.09	.12	.00	***
Community Service	.00	.00	.97	
Involved Member in College Organizations	-.01	-.03	.01	*
Held a Leadership Position in a college organization	.03	.08	.00	***
Off-campus involvement community/work-based organization	.01	.03	.00	***
Held a Leadership Position in an off-campus community or work-based organization	.02	.05	.00	***
Faculty Mentorship	.04	.03	.00	***
Academic/Student Affairs Professional Staff Mentorship	-.01	-.01	.40	
Employer Mentorship	.06	.05	.00	***
Community Member Mentorship	.04	.03	.00	***
Parent/Guardian Mentorship	.00	.00	.88	
Other Student Mentorship	.00	.00	.99	
R^2 **Change**	**.06**			
Intermediate Outcome				
Social Perspective-Taking	.17	.21	.00	***
R^2 **Change**	**.04**			
Summary				
R^2	.25			
Adjusted R^2	.25			
F	217.74			

	Congruence			
	B	β	p	Significance
Demographics				
White/ Caucasian	2.10		.00	***
African American/ Black	-.06	-.03	.00	***
Asian American	-.10	-.05	.00	***
Latinx/ Hispanic	-.03	-.01	.12	
Multiracial	-.04	-.02	.01	**
Gender	.05	.04	.00	***
R^2 **Change**	**.01**			
Pretest				
Pre-test for Omnibus SRLS	.26	.27	.00	***
R^2 **Change**	**.14**			
Social Networking				
Frequency	.02	.05	.00	***
Proficiency	.06	.09	.00	***
Centrality	-.03	-.06	.00	***
R^2 **Change**	**.02**			
Collegiate Experiences				
Socio-Cultural Conversations	.08	.12	.00	***
Community Service	.02	.02	.01	*
Involved Member in College Organizations	.02	.04	.00	***
Held a Leadership Position in a college organization	.01	.03	.00	***
Off-campus involvement community/work-based organization	.03	.06	.00	***
Held a Leadership Position in an off-campus community or work-based organization	-.01	-.01	.14	
Faculty Mentorship	.04	.03	.00	***
Academic/Student Affairs Professional Staff Mentorship	.01	.01	.37	
Employer Mentorship	.02	.02	.05	
Community Member Mentorship	.04	.03	.00	***
Parent/Guardian Mentorship	.01	.01	.38	
Other Student Mentorship	-.02	-.02	.02	*
R^2 **Change**	**.06**			
Intermediate Outcome				
Social Perspective-Taking	.19	.25	.00	***
R^2**Change**	**.05**			
Summary				
R^2	.28			
Adjusted R^2	.28			
F	252.37			

	Commitment			
	B	β	p	Signifinance
Demographics				
White/ Caucasian	2.49		.00	***
African American/ Black	-.05	-.02	.00	***
Asian American	-.11	-.06	.00	***
Latinx/ Hispanic	-.01	-.01	.53	
Multiracial	-.02	-.01	.05	
Gender	.07	.06	.00	***
R^2 **Change**	**.02**			
Pretest				
Pre-test for Omnibus SRLS	.23	.26	.00	***
R^2 **Change**	**.13**			
Social Networking				
Frequency	.04	.09	.00	***
Proficiency	.05	.09	.00	***
Centrality	-.06	-.11	.00	***
R^2 **Change**	**.03**			
Collegiate Experiences				
Socio-Cultural Conversations	.06	.09	.00	***
Community Service	.03	.03	.00	***
Involved Member in College Organizations	.01	.04	.00	***
Held a Leadership Position in a college organization	.01	.02	.15	
Off-campus involvement community/work-based organization	.01	.03	.00	***
Held a Leadership Position in an off-campus community or work-based organization	-.01	-.03	.01	*
Faculty Mentorship	.05	.05	.00	***
Academic/Student Affairs Professional Staff Mentorship	.00	.00	.94	
Employer Mentorship	.03	.03	.00	***
Community Member Mentorship	.02	.01	.09	
Parent/Guardian Mentorship	.01	.01	.21	
Other Student Mentorship	-.01	-.01	.23	
R^2 **Change**	**.04**			
Intermediate Outcome				
Social Perspective-Taking	.18	.26	.00	***
R^2 **Change**	**.06**			
Summary				
R^2	.27			
Adjusted R^2	.27			
F	238.65			

	Collaboration			
	B	β	p	Significance
Demographics				
White/ Caucasian	1.83		.00	***
African American/ Black	-.03	-.01	.10	
Asian American	-.07	-.04	.00	***
Latinx/ Hispanic	.00	.00	.88	
Multiracial	-.02	-.01	.11	
Gender	.00	.00	.83	
R^2 Change	**.01**			
Pretest				
Pre-test for Omnibus SRLS	.25	.27	.00	***
R^2 Change	**.16**			
Social Networking				
Frequency	.01	.03	.01	*
Proficiency	.07	.12	.00	***
Centrality	.00	.00	.65	
R^2 Change	**.04**			
Collegiate Experiences				
Socio-Cultural Conversations	.07	.11	.00	***
Community Service	.03	.03	.00	***
Involved Member in College Organizations	.02	.05	.00	***
Held a Leadership Position in a college organization	.01	.04	.00	***
Off-campus involvement community/work-based organization	.01	.03	.01	*
Held a Leadership Position in an off-campus community or work-based organization	.00	.00	.88	
Faculty Mentorship	.03	.02	.01	*
Academic/Student Affairs Professional Staff Mentorship	.02	.02	.02	
Employer Mentorship	.05	.04	.00	***
Community Member Mentorship	.03	.03	.00	***
Parent/Guardian Mentorship	.01	.01	.54	
Other Student Mentorship	.01	.01	.19	
R^2 Change	**.07**			
Intermediate Outcome				
Social Perspective-Taking	.24	.33	.00	***
R^2 Change	**.10**			
Summary				
R^2	.37			
Adjusted R^2	.36			
F	366.82			

Controversy with Civility				
	B	β	p	Significance
Demographics				
White/ Caucasian	1.99		.00	***
African American/ Black	-.07	-.03	.00	***
Asian American	-.05	-.03	.00	***
Latinx/ Hispanic	-.01	.00	.60	
Multiracial	-.02	-.01	.14	
Gender	.03	.03	.00	***
R² Change	**.01**			
Pretest				
Pre-test for Omnibus SRLS	.17	.18	.00	***
R² Change	**.11**			
Social Networking				
Frequency	.02	.05	.00	***
Proficiency	.05	.09	.00	***
Centrality	-.03	-.06	.00	***
R² Change	**.03**			
Collegiate Experiences				
Socio-Cultural Conversations	.13	.19	.00	***
Community Service	.01	.01	.07	
Involved Member in College Organizations	.01	.03	.00	***
Held a Leadership Position in a college organization	.00	.00	.96	
Off-campus involvement community/work-based organization	.00	.01	.33	
Held a Leadership Position in an off-campus community or work-based organization	-.01	-.02	.01	*
Faculty Mentorship	.03	.03	.00	***
Academic/Student Affairs Professional Staff Mentorship	.03	.02	.00	***
Employer Mentorship	.02	.02	.03	*
Community Member Mentorship	.02	.02	.01	*
Parent/Guardian Mentorship	-.01	-.01	.46	
Other Student Mentorship	.00	.00	.83	
R² Change	**.10**			
Intermediate Outcome				
Social Perspective-Taking	.30	.43	.00	***
R² Change	**.16**			
Summary				
R²	.40			
Adjusted R²	.40			
F	425.14			

	Citizenship			
	B	β	p	Significance
Demographics				
White/ Caucasian	1.22		.00	***
African American/ Black	.05	.02	.02	*
Asian American	-.02	-.01	.28	
Latinx/ Hispanic	.05	.02	.01	*
Multiracial	-.02	-.01	.20	
Gender	.11	.07	.00	***
R^2 **Change**	**.03**			
Pretest				
Pre-test for Omnibus SRLS	.23	.19	.00	***
R^2 **Change**	**.10**			
Social Networking				
Frequency	.01	.01	.28	
Proficiency	.04	.06	.00	***
Centrality	.04	.06	.00	***
R^2 **Change**	**.03**			
Collegiate Experiences				
Socio-Cultural Conversations	.13	.15	.00	***
Community Service	.23	.16	.00	***
Involved Member in College Organizations	.02	.05	.00	***
Held a Leadership Position in a college organization	.04	.09	.00	***
Off-campus involvement community/work-based organization	.05	.09	.00	***
Held a Leadership Position in an off-campus community or work-based organization	.02	.03	.00	***
Faculty Mentorship	.05	.03	.00	***
Academic/Student Affairs Professional Staff Mentorship	.05	.04	.00	***
Employer Mentorship	.03	.02	.02	*
Community Member Mentorship	.11	.07	.00	***
Parent/Guardian Mentorship	-.03	-.02	.01	*
Other Student Mentorship	.02	.02	.03	*
R^2 **Change**	**.19**			
Intermediate Outcome				
Social Perspective-Taking	.23	.24	.00	***
R^2 **Change**	**.05**			
Summary				
R^2	.39			
Adjusted R^2	.39			
F	412.30			

Because the demographic block explained a limited proportion of variance and because this was not the primary variable of influence, only the detailed results are explained for the full-range model on the outcomes of commitment and citizenship. This is because the relative contribution of demographics in these models was 2% and 3%, respectively. Among the independent variables comprising the demographic block, the following demonstrated significance and contributed to the variance explained for commitment: identification as Asian ($\beta = -.06$; $p < .001$) and gender identification as a woman ($\beta = .06$; $p < .001$). The following demonstrated significance for citizenship: gender identification as a woman ($\beta = .07$; $p < .001$).

The pretest block consistently explained the most variance across models. The variance explained by the block ranged from 10% to 16%. Full details are available in Table 7. The social networking block explained a significant and meaningful 2% to 4% of variance across outcomes. Because social networking is the focus of the questions guiding this study, detailed information is provided for each of its component elements in Table 7. The following social networking variables emerged as significant across outcomes.

Social networking frequency was statistically significant for congruence ($\beta = .05$; $p < .001$), commitment ($\beta = .09$; $p < .001$), and controversy with civility ($\beta = .05$; $p < .001$). Social networking proficiency was statistically significant for all outcomes at the $p < .001$ level: consciousness of self ($\beta = .13$; $p < .001$), congruence ($\beta = .09$; $p < .001$), commitment ($\beta = .09$; $p < .001$), collaboration ($\beta = .12$; $p < .001$), controversy with civility ($\beta = .09$; $p < .001$), and citizenship ($\beta = .06$; $p < .001$). Social networking centrality was statistically significant for congruence ($\beta = -.06$; $p < .001$), commitment ($\beta = -.11$; $p < .001$), controversy with civility ($\beta = -.06$; $p < .001$), and citizenship ($\beta = .06$; $p < .001$). It is important to note the negative β values for congruence, commitment, and controversy with civility.

The variance explained by the high-impact practices blocks across regression models was between 4% and 19%. Table 7 provides detailed information about the various variables that contribute to the block for each of the outcomes. Because high-impact practices were not a focus of this study, these data are not interpreted in the context of this research. The focus of this study was to examine social networking and its influences.

The variance explained by the final block in the model, reflecting the intermediate outcome of social perspective-taking, ranged between 4% and 16% and was statistically significant for all outcomes at the $p < .001$ level: consciousness of self ($\beta = .21$; $p < .001$), congruence ($\beta = .25$; $p < .001$), commitment ($\beta = .26$; $p < .001$), collaboration ($\beta = .33$; $p < .001$), controversy with civility ($\beta = .43$; $p < .001$), and citizenship ($\beta = .24$; $p < .001$).

Summary

Collectively, social networking provided a value-added, consistent, and statistically meaningful contribution to explaining variance in college students' leadership outcomes. The relative contribution of the social networking block ranged from 2% to 4%. In response to the first research question about the extent to which **frequency** influences outcomes, the measure had a statistically meaningful and positive impact on congruence, commitment, collaboration, and controversy with civility. In response to the first research question about the extent to which **proficiency** influences outcomes, the measure had a statistically meaningful and positive impact on all outcomes: consciousness of self, congruence, commitment, collaboration, controversy with civility, and citizenship. In response to the first research question about the extent to which **centrality** influences outcomes, the measure had a statistically meaningful and positive impact on citizenship. The measure had a statistically meaningful and negative impact on congruence, commitment, and controversy with civility.

In response to the second research question about the extent to which inclusion of **social perspective-taking** as an intermediate outcome influences outcomes, the measure had a statistically meaningful and positive impact on all outcomes: consciousness of self, congruence, commitment, collaboration, controversy with civility, and citizenship. However, the inclusion of social perspective-taking did not erode the value-add of the social networking block, instead increasing the overall explanatory power of the models.

Given the exploratory nature of this research, post hoc analyses were conducted to determine whether the relative contribution of social networking was durable and meaningful in the context of known influences on leadership development referred to in the literature as high-impact practices. Results indicated that social networking was still relevant and explained 2% to 4% of the variance. The inclusion of this additional step in the full-range model also increased the total variance explained from 25% to 40%, strengthening the relative explanatory power of the models.

CHAPTER 5: DISCUSSION

This final chapter presents the findings from this study as they relate to the existing literature, along with an interpretation of results, implications for research and practice, and limitations of the study. Given the limited research on this topic, the exploratory nature of the research design, and the volume of models calculated, findings were distilled to offer five primary discoveries along with implications for practice associated with each. Recommendations for future research outline a number of additional questions that emerge from this research and could be examined among countless opportunities to further mine these data and results. Limitations associated with the study are reviewed so readers can contextualize results. The chapter ends with a final conclusion synthesizing the research study.

Statement of Problem

Studying the impact of social networking as an environmental influence is difficult but important work (Avolio & Kahai, 2003). Technology is ever-changing, causing research to be outdated soon after it is conducted, analyzed, and published. The importance of understanding the influence of social networking on socially responsible leadership in college students is particularly crucial given the high concentration of college students using social networking daily (Chen & Marcus, 2012) and the primacy of leadership development as a core outcome of college (Council for the Advancement of Standards in Higher Education, 2009; Thelin & Gasman, 2016). Social networking provides a conduit for leadership development in online spaces, given that leadership is based in relationship exchanges (Komives & Wagner, 2017). Yet,

89

the literature on understanding educational impacts of social networking is sparse, and the specific relationship to leadership development almost altogether absent.

The limited research on college student leadership and social networking focuses almost exclusively on how students interact with the platform and tangible actions they can take to ensure appropriate behavior on social networking (Ahlquist, 2017). Similar to the Hippocratic oath, students are being taught to "do no harm" to themselves when it comes to social networking, rather than "doing good" for themselves and others. Social networking cannot be treated as secondary in students' lives nor something that will be a passing trend. Nor can the very real implications of social networking on leadership development be ignored as students increasingly use these platforms for both connecting and taking collective action (Aiken, 2016; Chen & Marcus, 2012; Gismondi & Osteen, 2017). The application of social networking has the potential to shape numerous outcomes, high-impact practices, and student experiences, including socially responsible leadership capacity.

The value of this study lies in its ability to identify tangible relationships between social networking and leadership development. Results point to critical ways in which these concepts influence one another and practical recommendations educators can take to optimize students' leadership development. This study advances the limited research present on social networking as a whole and brings to light the importance of how social networking influences leadership behavior.

Research Questions

The purpose of this study was to examine the extent, if any, to which social networking influenced college students' capacities for socially responsible leadership. More specifically, this study investigated the following questions:

- To what extent, if any, does social networking **<u>frequency</u>** influence college students' capacities for socially responsible leadership?

- To what extent, if any, does social networking **<u>proficiency</u>** influence college students' capacities for socially responsible leadership?

- To what extent, if any, does social networking **<u>centrality</u>** influence college students' capacities for socially responsible leadership?

This study also explored as an intermediate outcome the following question:

- To what extent, if any, does the inclusion of **<u>social perspective-taking</u>** as an intermediate outcome shape the influence of social networking on college students' capacities for socially responsible leadership?

Literature Summary

While previous leadership research had already identified a number of influencers of socially responsible leadership, emerging research on social networking alludes to the possibility that it is an additional source of influence (Cabellon & Brown, 2017). These hypothesized relationships, however, remain largely untested by empirical literature. Social networking sites are described as online, electronic communication tools (e.g., Facebook, Twitter, Snapchat) providing individuals the ability to construct profiles, display user connections, share information, and search connections (boyd & Ellison, 2007). The popularity and utilization of social networking has

altered the way individuals obtain, process, and disseminate information (Avolio & Kahai, 2003). This change may increase interaction (Rosen & Nelson, 2008), relationship development (Ahlquist, 2017), and the co-construction of knowledge (Greenhow, 2011).

Empirical research does, however, support the importance of social perspective-taking as an intermediate outcome in building leadership capacity (Dugan et al., 2014; Johnson et al., 2017). Social perspective-taking is developed through an individual's understanding of themselves in the context of others and their environment (Galinsky et al., 2005; Johnson, 1975). Social networking is a unique, understudied, but ever-present environment for college students today where engagement with others is heightened (boyd & Ellison, 2007; Glazer-Raymo, 2016; Martínez-Alemán, 2014), suggesting there may be important findings to better understand the relationship between social networking and social perspective-taking in socially responsible leadership.

Finally, high-impact practices have been widely accepted on college campuses as critical to the student experience. A series of research studies identify subsets of high-impact practices that are particularly influential in leadership development (Dugan, Kodama, Correia, & Associates, 2013; Dugan, Kodama & Gebhardt, 2012; Dugan & Komives, 2010; Kezar & Moriarty, 2000). These include sociocultural conversations, community service, involvement or leadership in student organizations, involvement or leadership in off-campus organizations, and mentoring (Kuh, 2008). Despite emerging scholarship, there remains a dearth of evidence from large-scale studies to explore the relationship between high-impact practices and the influence of social networking (Ahlquist, 2017) on leadership development. As such, this exploratory study was designed to fill these problematic gaps.

Review of Methods

This quantitative, cross-sectional study used data collected as part of the 2018 Multi-Institutional Study of Leadership (MSL). Specifically, new questions were developed and added to the MSL 2018 questionnaire assessing frequency, proficiency, and centrality of social networking among college students. Data were collected online between January and April 2018. The total sample size for the national data set was 256,289 cases. The national response rate was 29%, with a total number of 54,430 completed cases. To answer the questions posed by this research, 14,564 cases were selected per the sample selection parameters outlined in Chapter 3.

Variables were organized into three different sets of regression models, ranging from three blocks to five blocks. Independent variables drew from previous research focused on socially responsible leadership, social perspective-taking, and social networking. The first block of variables examined demographics and included two input variables: gender and racial group membership. The second block was the pretest for the outcome measure of the six socially responsible leadership capacities. The third included social networking frequency, proficiency, and centrality. These three blocks made up the *basic model*. To answer the secondary research question, *intermediate models* were calculated that added a fourth block, with social perspective-taking serving as an intermediate outcome. Given the exploratory nature of this research and the lack of prior evidence to support hypotheses, post hoc analyses were conducted to better contextualize the relative contribution of social networking to leadership development. This led to a third model, referred to as the *full-range model*, that incorporated an additional block representing high-impact practices that influence socially responsible leadership development.

Summary of Results

Using the full-range model, results demonstrated that social networking provided a value-added, consistent, and statistically meaningful contribution toward the explanation of variance in college students' leadership outcomes. Given the large sample size, the significance of individual variables within the overall model was interpreted at a more conservative .01 level. The amount of variance explained for each model ranged from a low of 25% on consciousness of self to a high of 40% on controversy with civility. The relative contribution of the social networking block ranged from 2% to 4%. While 2% to 4% may seem trivial at a superficial level, for a frame of reference, this percentage is similar to the findings associated with identity.

The following interpretations were made using the full-range model of data. In response to the first research question about the extent to which social networking **frequency** influences outcomes, the measure had a statistically meaningful and positive impact on congruence, commitment, collaboration, and controversy with civility. In response to the first research question about the extent to which **proficiency** influences outcomes, the measure had a statistically meaningful and positive impact on all outcomes: consciousness of self, congruence, commitment, collaboration, controversy with civility, and citizenship. In response to the first research question about the extent to which **centrality** influences outcomes, the measure had a statistically meaningful and positive impact on citizenship. The measure had a statistically meaningful and negative impact on congruence, commitment, and controversy with civility.

In response to the second research question about the extent to which inclusion of social perspective-taking as an intermediate outcome influences outcomes, the measure had a statistically meaningful and positive impact on all outcomes: consciousness of self, congruence,

commitment, collaboration, controversy with civility, and citizenship. The inclusion of social

perspective-taking did not, however, alter or erode the relative contributions of the social

networking block.

Given the exploratory nature of this research, post hoc analyses were conducted to determine

whether the relative contribution of social networking was durable and meaningful in the context

of known influences on leadership development referred to in the literature as high-impact

practices. The inclusion of these variables offered an extension beyond the original parameters

intended by the study to help determine whether the consistent contribution of social networking

was sustainable even in the context of the most potent known indicators of socially responsible

leadership development. Results supported the sustainability of the effect, indicating that social

networking explained a consistent 2% to 4% across the full-range models.

Interpretation of Results

The first of two research questions examined whether social networking (a) frequency, (b)

proficiency, and (c) centrality were statistically significant in influencing college students'

capacities for socially responsible leadership. The second research question examined the effect

of adding social perspective-taking as an intermediate outcome to determine statistical

significance. Results emerged showing a number of relationships. Post hoc analyses confirmed

the durability of contributions associated with social networking to socially responsible

leadership in a full-range model. Given the large volume of analyses, this section distills five

crucial themes that emerged from the results.

Social Networking Matters to Socially Responsible Leadership

Perhaps the single most important finding of this exploratory research is the establishment of a tangible and statistically meaningful link between social networking usage and socially responsible leadership. While scholarship around social networking is growing, large-scale studies focusing on the influence of social networking on socially responsible leadership remain sparse (Ahlquist, 2017; Baek et al., 2012; Papacharissi, 2004). This research, therefore, provides much-needed evidence to grow this body of literature.

Furthermore, not only does this study confirm a relationship between social networking and socially responsible leadership, it goes two steps further and demonstrates that this relationship exists above and beyond known influences like high-impact practices and social perspective-taking. This suggests that social networking offers its own discrete contributions to leadership development that deserve exploration, in their own right, by those committed to advancing leadership education. Emerging research alludes to the potential social networking has for influencing leadership education and experiences (Cabellon & Brown, 2017) and for providing opportunities to build relationships for social good (Ahlquist, 2017). This study provides evidence of this importance while also distinguishing nuances in social networking usage.

Findings from this study revealed that there is not a uniform effect of frequency, proficiency, and centrality on socially responsible leadership outcomes. Rather, each offers unique contributions and considerations explored across the themes that follow. This supports the literature that claims social networking has and will continue to change communication channels between people (Avolio & Kahai, 2003; Rosen & Nelson, 2008). This change will be felt most

among those who most frequently use and embrace a variety of social networking platforms—

that is, younger Americans (especially those ages 18 to 24; Smith & Anderson, 2018).

Social Networking Centrality: A Concerning Influence

Social networking *centrality* analyzes the emotional connectedness of social networking to

college students (Ellison et al., 2007). The aim of collecting these data was to measure how

integrated and important social networking is to a college student's daily routine. Social

networking centrality was the only factor in its block to produce negative, statistically significant

relationships. Negative statistical significance was determined on the outcomes of congruence,

commitment, and controversy with civility. There was no statistical significance for

consciousness of self and collaboration and a positive statistical significance for citizenship.

Citizenship is about being part of a community. Citizenship, as defined by the Social Change

Model of Leadership, implies active engagement and social connectedness rather than passive

membership for the purpose of serving the larger community (Higher Education Research

Institute, 1996). Individuals who are highly involved in social networking tend to discover

communities through social networking sites (Ellison et al., 2007). This community may create a

vehicle for social engagement. Social networking centrality works to uncover the emotional

connectedness of social networking to college students (Ellison et al., 2007). For example,

individual measures of the scale include, "I feel out of touch when I haven't logged onto social

[networking] for awhile" and "I feel like I'm part of a community on the social [networking]

platform that I use most frequently." Citizenship and social networking centrality have a positive

relationship, possibly signifying that the community *is* the online environment.

Congruence, in its simplest definition, asks individuals to align their beliefs with their actions and behaviors (Higher Education Research Institute, 1996). The negative influence in congruence may be connected to an individual presenting an oversimplified version of themselves online in hopes of reducing ambiguity (Chen & Marcus, 2012; Walther & Braithewaite, 2008). This is a common practice in online spaces given the lack of communication channels available. However, the result may lead to a disconnect between their beliefs and behaviors. If social networking centrality is high for a student, they may have indicated that they "feel like [they are a] part of a community on the social [networking] platform that [they] use most frequently." A high centrality would indicate low congruence, meaning that they feel the oversimplified version of themselves they may be presenting does not provide an appropriate representation to this online group that is important to them.

This finding yields more questions that it resolves. What is it about social networking that, when it is central to someone, may cause their values to be incongruent? Is this because individuals have more control over the identity they curate online versus in person? Or perhaps the established norms of engaging online vary from those in person and allow individuals to engage online in ways they would not in person. Perhaps this finding is more related to behavior than identity.

The other individual value of commitment (i.e., intensely involving oneself and one's time in an activity; Higher Education Research Institute, 1996) also presented a negative correlation. When factoring for the rapid flow of communication through social networking (Avolio & Kahai, 2003) this finding is logical. An individual who is more connected to social networking may find value in and be accustomed to this rapid exchange. This rapid exchange, however, may

not invite the intensity of self and time required to engage in commitment. Commitment requires sustenance and investment (Kerkoff & Ostick, 2017), which may be absent in social networking centrality.

The final negative influencer is controversy with civility. Controversy with civility seeks to create an environment of trust between those involved and recognition that conflict not only *can* exist but *should* exist, be encouraged, and be ever-present (Alvarez, 2017). Social networking is assumed to accelerate trust (Aiken, 2016; Chen & Marcus, 2012; Junco, 2014; Suler, 2004); therefore, a negative correlation may be surprising. However, engaging in social networking allows only 7% of typical communication methods to be utilized (Hill & Hughes, 1998). For someone who places social networking as a core experience in their life (i.e., who has high centrality), the loss of communication may be detrimental when engaging in controversy with civility in real life. Given that the norms of civility online often differ from those that are acceptable in person (Baek et al., 2012), the level of social networking centrality may suggest that what is acceptable online is being presumed to be acceptable in person, causing gaps in a student's capacity for civility.

Similar logic could explain the *positive* correlation between controversy with civility and social networking *frequency*. Findings demonstrated that an increase in social networking frequency results in a higher capacity for controversy with civility. This implies that the more someone is using social networking, the more they are able to engage in controversy with civility. The increased use may allow relationships to develop further (Walther & Braithewaite, 2008), which may result in a higher ability to engage in controversy with civility.

Social networking *centrality* is critical to understand beyond usage patterns and digs deeper into the connectedness of social networking in college student identity and behavioral patterns. While these findings were the only ones to produce negative relationships, one should not make an interpretive leap assuming social networking centrality is bad. It simply means there is an inverse relationship between some of the variables representing social networking centrality and socially responsible leadership. These interpretations provide context and an opportunity to cast light on a shadow of the unknown.

Recognizing the Complexity of Social Networking Frequency

Social networking frequency—the number of times an individual uses social networking over a period of time—demonstrated the least number of statistically meaningful relationships with outcome measures ($n = 3$). The three statistically significant findings (i.e., congruence, commitment, and controversy with civility) each held a positive relationship. This finding is inversely related to social networking frequency and social networking centrality.

While social networking frequency shows positive relationships with congruence, commitment, and controversy with civility, social networking centrality shows negative relationships with these same outcomes. For example, if someone shows high social networking frequency, they will show a high level of congruence. Conversely, if they show a high level of social networking centrality, they will show a low level of congruence. These results demonstrate that being *involved* in social networking and being *invested* in social networking yield different outcomes in real life. This points to the importance of acknowledging that online experiences also require meaning making, just as in-person experiences do. Similar to how Kuh (2008) identified core high-impact practices to deepen understanding of student experiences,

social networking perhaps needs a similar study to identify online practices to deepen

understanding of the online student experience and ways in which it contributes to values and

identity formation.

Additionally, the literature discussed in Chapter 2 highlighted the critical linkages between

social capital and leadership and the potential influences of social networking on social capital

but failed to draw a connection among all three. Social capital is essential to leadership

development (Adler & Kwon, 2002; Brass, 2001; McCallum & O'Connell, 2009). Prior research

has addressed frequency and centrality as they relate to social capital (Ellison et al., 2007), but in

different capacities. Aubrey and Rill (2013) found a direct positive correlation between social

networking frequency and social capital in both online and offline environments. Regarding

centrality, scholars (e.g., Baase & Henry, 2017; Ellison et al., 2007; Steinfield et al., 2008) found

that higher levels of social networking centrality may also increase social capital. However,

others claim social networking breeds isolation and false representation (Chen & Marcus, 2012;

Walther & Braithewaite, 2008), leading to decreased social capital. The results from this study

contribute to the confusion.

If social capital is indeed connected to both frequency and centrality, as well as leadership

development, one would not expect inverse results. Perhaps neither of these experiences are

predictors of social capital, but rather how effectively someone uses the tool (i.e., proficiency) is

truly the key to leveraging social capital. Research connecting proficiency and social capital is

neglected in the literature. However, proficiency is important for someone to take proper action.

For example, if someone does not know how to ask for a recommendation through social

networking, will the ask ever happen? If the ask does not happen, an opportunity to grow social

capital may be missed. Current literature fails to examine the correlation between social networking effectiveness (i.e., proficiency) and social capital (Steinfield et al., 2008).

The three instances of no findings (i.e., consciousness of self, collaboration, and citizenship) indicate that social networking frequency had no effect on those outcomes. These findings add to the debate regarding the influence that time spent on social networking may have on an individual. Some scholars argue social networking breeds isolation and false representation (Chen & Marcus, 2012; Walther & Braithewaite, 2008), while others believe it increases communication and human connectivity (Baase & Henry, 2017; Ellison et al., 2007; Steinfield et al., 2008). These seemingly contradictory explanations in the literature point to a much more complex relationship between social networking usage and leadership development, which is confirmed in this research. There is not a simple, positive effect but areas of unique influence. The positive influence of frequency on congruence, commitment, and controversy with civility supports studies that identify benefits. The lack of findings on consciousness of self, collaboration, and citizenship outcomes, combined with the negative findings associated with the influence of centrality on congruence, commitment, and ability to engage in controversy with civility, suggest that scholars are also correct about negative effects (Baek et al., 2012). This more complex interpretation of results may be inconvenient as it increases the difficulty of applying findings to practice. However, it also supports existing claims.

Given that a core tenet of socially responsible leadership involves connecting and fostering relationships with others, perhaps having another outlet to do so (i.e., social networking) will only increase, not replace, communication and enhance rather than replace the potential for positive communications and relationships. The opposite is also true. With additional

opportunity come potential new pitfalls and chances for no or negative effects. This situates understanding social networking usage as even more crucial. Unfortunately, this study was not designed to answer questions related to why relationships between independent and dependent variables emerge as they do.

Social Networking Proficiency: They Can (and Must) Be Taught!

At the core of social networking proficiency is the study of the quality of one's social networking usage. Social networking proficiency includes "technical, cognitive and social-emotional perspectives of learning with digital technologies" (Ng, 2012, p. 1066). There is positive statistical significance between proficiency and all six socially responsible leadership outcomes.

This finding is jarring, given that social networking proficiency is often positioned as a presumed skill set among college students because many have grown up with technology as a constant and integral part of their lives (Prensky, 2001). As such, formal instruction is often bypassed, assuming they have acquired this knowledge through informal practices. However, college students reported that informal learning around digital literacy was ineffective (Ahlquist, 2017). Although there were statistical correlations between frequency, centrality, and proficiency, the degree of relationship suggests that the three concepts likely have unique properties. Therefore, one cannot assume a level of proficiency just because of frequency or centrality, and vice versa. This, in and of itself, is an important finding that should shape how future research is conducted. Researchers should ensure all three factors are considered rather than taking a more simplistic approach that presumes the overlap among the concepts suggests they are synonymous.

Findings from this study show that the more capable a student is in using social networking, the more they are able to engage in socially responsible leadership. Therefore, educators cannot assume knowledge nor shirk responsibility in ensuring college students are properly equipped to engage in social networking. While there are notable organizations and programs implementing intentional learning outcomes around social networking and technology (e.g., American College Personnel Association, National Association of Student Personnel Administrators, Association of American Colleges & Universities), there is a dearth of research documenting formal social networking instruction as mainstream. Furthermore, the existing literature does not detail the nuances in social networking usage (i.e., frequency, centrality, and proficiency). A lack of clear definitional parameters in the literature is problematic, as this study suggests critical findings in these details.

Social Perspective-Taking and High-Impact Practices

Given the lack of published research on social networking usage, there was a desire to strengthen this exploratory study. Therefore, an intermediate outcome variable of social perspective-taking was added in hopes of offering additional explanatory power. Social perspective-taking was chosen given that the literature alludes to its absence in online dialogues (Baek et al., 2012). Adding social perspective-taking to the model assisted in determining whether it was an omnibus developmental factor that social networking usage would be subsumed under.

However, this research demonstrated that social networking usage held statistically significant meaning even after the addition of social perspective-taking as an intermediate

outcome. This may suggest that assumptions cannot be made that instruction designed to teach

social perspective-taking for face-to-face interactions will translate into online spaces.

Additionally, post hoc analyses to include high-impact practices were also conducted. Post

hoc analyses that included high-impact practices indicated that engagement in social networking

mattered even with the addition of these critical experiences. Social networking usage also

retained its relevance above and beyond the introduction of high-impact practices. Social

perspective-taking was statistically significant for all six outcomes. This situates social

perspective-taking as a powerful co-contributor to socially responsible leadership in the context

of social networking engagement. However, this powerful co-contributor also leads to powerful

questions.

Of particular interest is the question as to whether social networking increases one's ability to

engage in social perspective-taking or simply allows echo chambers of similar views,

encouraging ideological isolation (Baase & Henry, 2017). Results from this study resoundingly

attest that engagement in social networking does increase one's ability to engage in social

perspective-taking, which, in turn, relates to socially responsible leadership gains.

Arguably, social perspective-taking may be an outcome that experiences more of an "all or

nothing" approach as it relates to the six socially responsible leadership outcomes. For example,

if one were not committed to collaboration, the intentionality to reach out to others to eliminate

geographic barriers and stereotypes (Walther & Braithewaite, 2008) to gain social perspective

might be jeopardized. Or if one were not committed to citizenship, the opportunity for

individuals from various backgrounds to learn from each other might be lost, thus losing

opportunities to gather stories that might enrich worldviews and increase social perspective-taking (Mesch, 2012).

This research was designed to identify tangible relationships between social networking and socially responsible leadership. Results demonstrated that social networking provided a value-added, consistent, and statistically meaningful contribution toward the explanation of variance in college students' leadership outcomes, even with the addition of social perspective-taking as an intermediate outcome and post hoc analyses including high-impact practices. Five key themes emerged that assist the understanding of the relationship between social networking usage and socially responsible leadership.

Implications for Practice

Given these findings, there are several implications practitioners should consider to best support students in socially responsible leadership. An underlying purpose of this research was to improve college student leadership development and consider the potential implications of social networking in that process. Currently, educators' prototypical consideration and application of social networking to college students is in marketing or as a tool sprinkled into coursework or programming about compliance with protocol and appropriate behaviors. This study provides evidence that social networking is capable of much more, for better and worse, depending on how it is embraced. This section walks through seven considerations that emerge for leadership educators who wish to optimize socially responsible leadership development by better addressing social network usage.

First, it is imperative that social networking be framed as a positive addition to a college experience, rather than something that hinders learning. Though one may point to results from

this study showing that social networking centrality has negative relationships with leadership outcomes, the findings themselves are not negative, but rather show the importance of deeper experiences rather than superficial involvement. Social networking is important to college students and demonstrates a measurable relationship with leadership development; therefore, it is the responsibility of college educators to ensure that social networking becomes important for the right reasons and that attention is directed toward shaping frequency, proficiency, and centrality. As a point of comparison, social networking usage explained an equivalent or larger proportion of the variance associated with demographic factors. Framed another way, we cannot alter racial and gender identity statuses as a means to increase leadership development, nor should we, but we can have an effect on behaviors and mindsets associated with social networking usage. For example, college students who identify as minorities on campus may use social networking to negate feelings of marginalization and stay connected with their support network (Junco et al., 2010). Finding ways to increase minoritized students' proficiencies with social networking usage while simultaneously pushing institutions to use social networking as a platform for education could prove invaluable.

Intentional Instruction

Perhaps the cornerstone of implications for practice is in how best to intentionally teach students social networking proficiency as it relates to socially responsible leadership. Findings from this research are limited by the quantitative design utilized for the study. However, several recommendations can be made related to the ways in which educators could bring social networking frequency, proficiency, and centrality into sharper focus in leadership development.

Current higher education speakers and consultants focus on telling students what not to do online, rather than showing how to positively embrace technology to grow their (a) capacity to practice socially responsible leadership, (b) ability to engage in social perspective-taking, and (c) social capital. The assumption that college students have technological knowledge acquired through informal practices or that formal instruction is unnecessary and repetitive cannot be accepted. Digital literacy is not intuitive or inherent and must be intentionally learned (Ng, 2012).

The governing bodies of ACPA and NASPA have developed a competency tailored to technology education and technology professional development. Practitioners are encouraged to review this document for an exhaustive list of opportunities to weave technology into practice and into their own professional development. The competency

> focuses on the use of digital tools, resources, and technologies for the advancement of student learning, development, and success as well as the improved performance of student affairs professionals. Included within this area are knowledge, skills, and dispositions that lead to the generation of digital literacy and digital citizenship within communities of students, student affairs professionals, faculty members, and colleges and universities as a whole ("Professional Competency Areas for Student Affairs Educators," 2015, p. 15).

Opportunities range from staying current on technology applications to engaging "students in learning activities related to responsible digital communications and virtual community engagement as related to their digital reputation and identity" ("Professional Competency Areas for Student Affairs Educators," 2015, p. 33). It would be advantageous for instructors and practitioners to develop at least one learning outcome intentionally addressing social networking for each leadership course or program. Currently, curricular and cocurricular learning outcomes mostly lack digital learning objectives (Ahlquist, 2017). Additionally, active engagement in

social networking throughout a leadership class or program could be effective. For example, a hashtag could be established on Twitter for student leaders to utilize to stay connected to one another or provide resources and support to one another, thereby increasing their ability to engage in socially responsible leadership, the most obvious being collaboration.

Professionally, educators could add a technology component to their professional development plan to grow their knowledge from understanding technology as a broad topic to becoming keenly aware of the influence it has on leadership development. Educators need to be intentional, knowledgeable, and current with all that technology offers (Aiken, 2016; Cabellon & Brown, 2017). Hesitation to embrace social networking (Martínez-Alemán, 2014) will result in a lack of use in classroom and program design, creating a self-fulfilling prophecy. A professional goal relating to an educator's own social networking frequency, proficiency, and centrality would deepen their understanding on how these variables matter in practice. A good place to begin might be to monitor their own proficiency on social networking: educators could begin to monitor themselves, which platforms they are familiar with, where they can learn more, and how their experiences connect to socially responsible leadership. This will assist in growing their capacity for understanding the platforms and implementing them into leadership programs. It will also demonstrate the importance of proficiency as it relates to socially responsible leadership. As a by-product, educators may ask students for help, thus reinforcing the nonpositionality of leadership.

One example of social networking implementation uses Twitter to engage students outside of the classroom (McWilliams, Hickey, Hines, Conner, & Bishop, 2011). This can be helpful in both extending the conversation but also folding in real-world context to classroom topics. I

experienced Twitter being used in the classroom firsthand during a doctoral course in Leadership Theory. The assignment asked students to tweet five times per week on topics relevant to the course material, respond to other students' tweets, and tweet on a professional development topic of our choice (Dugan, 2016). The purpose, as defined by the instructor, was to "increase a sense of community, offer a platform to prepare for and engage with course readings outside the classroom, and work on an aspect of personal development over the course of the semester" (Dugan, 2016, p. 9). While I was apprehensive about the assignment at the beginning of the semester, I found that by the end of the semester, I had built community with my classmates and connected my coursework with real-life application beyond what could take place through traditional academic channels of instruction. This growth allowed me to engage in socially responsible leadership, particularly in the spaces of commitment to my peers and citizenship in the field of higher education.

High-Impact Practices

Post hoc analyses including high-impact practices held statistical integrity, thus strengthening evidence on the importance of social networking usage with regard to socially responsible leadership. Educators must validate and integrate social networking while partaking in these high-impact practices (e.g., mentorship). For example, perhaps a student would feel more comfortable with a mentoring relationship that existed online rather than in-person meetings.

Although the purpose of this research was not to study high-impact practices, their inclusion in the full-range model points to their importance in connection with social networking usage. Therefore, practitioners must reconsider sociocultural conversations, community service, involvement or leadership in student organizations, involvement or leadership in off-campus

organizations, and mentoring (Kuh, 2008) in the context of how they interact with social networking. It would be a mistake for practitioners to presume that high-impact practices are divorced from social networking usage. Considering the relationship between social networking and high-impact practices can only strengthen high-impact practices.

Implications for Future Research

There is a deficit of research surrounding the influence of social networking on socially responsible leadership in college students, with, at times, contradictory findings (Glazer-Raymo, 2016). This exploratory study aimed to add to the body of literature around a rapidly growing and evolving topic. Future research opportunities are plentiful. This section walks through nine considerations that emerge for leadership researchers who wish to expand the knowledge base on this understudied topic.

This research statistically establishes previously hypothesized relationships between social networking usage and socially responsible leadership. As already articulated, though, implications are limited by the nature of the quantitative design. Perhaps the most robust and helpful approach for future research would be to begin to unpack this topic qualitatively. Qualitative research may lead to a more robust understanding of what contributes to identity centrality for social networking usage, what that looks like as a form of identity development, along with how it might interact with assumptions from student development theory. For example, qualitative research could examine deeply and profoundly (a) specific and deeply felt experiences that occur through social networking that may influence overall perception of the tool, (b) the angst and consequences of using social networking between instructors and students, or (c) how social networking is being used in curricular and cocurricular spaces.

The impact of social networking centrality yielded contradictory findings. Given that the social networking literature focuses on identity, a natural extension of this research should explore the degree to which social networking centrality reflects a deeper form of identity in and of itself as well as precisely how centrality shapes identity. Findings from the study point to the need for future research that also explores the role of values formation in identity formation. Given the findings related to congruence and self-awareness, social networking usage clearly shapes identity, and questions emerge that merit further explanation on precisely how.

Chickering (1969) established seven vectors focusing on college student identity development. While Chickering is one of many theorists in student identity development theory, his work is foundational. However, just as the literature has grown with the discovery of new identities, perhaps his work should be re-examined in light of these contemporary findings involving social networking. Perhaps there is a need to include mastery and convergence of online and in-person identities. Will digital identities require separate theories? Or might digital identities present as an overlay, as the relational leadership model has done for the leadership literature? Will digital identities look like a simplified version of one's in-life persona (Chen & Marcus, 2012; Walther & Braithewaite, 2008), or are digital identities significantly different? Additionally, does the online environment shape the individual, or does the individual shape the online environment? Or perhaps there is reciprocal influence?

This research examined the relationships between social networking usage and a highly specific form of learning related to socially responsible leadership development. We should not presume that the relationships identified here would hold in the context of other outcomes (e.g., resilience, cognitive development) even if they relate to leadership development. Replication

studies could use the same research design implied here but simply swap out outcomes associated with socially responsible leadership for other critical educational outcomes. Furthermore, research should explore how social networking influences curricular and cocurricular experiences separately. Little is known about the effect social networking usage may have on learning or how these two elements coexist. Research could confirm or dispel readily accepted myths that social networking is harmful to student learning and engagement. Traditional-aged college students are actively using social networking sites in their daily lives and many students are open, with reservations, to incorporating social networking into the classroom. Educators, on the other hand, are more cautious with the implementation, citing a risk of privacy infringement and the need for boundary refinement with their students (Gikas & Grant, 2012). I cannot argue this point as it is likely true: privacy and boundaries will have to be reimagined. Future research could engage educators and students to uncover how to successfully navigate this terrain.

With post hoc analysis addressing high-impact practices as a whole, future research could analyze each practice at the micro level to determine which practices are most influenced by social networking engagement. For example, we need to understand how social networking usage influences the potency and process (Abbas & Mesch, 2018; Barry & Bouvier, 2011) for which sociocultural conversations shape socially responsible leadership.

Additionally, future research should disaggregate demographic results including identities that (a) presented as statistically meaningful or (b) were removed given low sample size. This will avoid the replication of dominant narratives throughout the literature. This is also critical as

it relates to socially responsible leadership in that prior research has identified differential predictors for leadership development based on race and gender.

Similarly, given the range of variance explained (i.e., from 25% with consciousness of self to 40% with controversy with civility), disaggregating each socially responsible leadership outcome in deeper and more encompassing contexts could be advantageous. For example, the literature behind controversy with civility is vast and spans a number of disciplines. Further research can use these findings to explore this outcome at a deeper level as each outcome varied in its explained variance and strength.

As the literature on social networking grows, it would be advantageous to re-evaluate the measures of frequency, proficiency, and centrality to ensure they maintain validity. The development of these measures was based on the current literature, which is sparse (Ahlquist, 2017; Baek et al., 2012; Papacharissi, 2004). As more research is conducted and published, these measures may be refined and developed further. Additionally, results might be strengthened if frequency were to include questions around time duration and in what ways (e.g., professional, social, academic) individuals were using social networking platforms. Disaggregating data by platforms, while difficult given the constant evolution of technology (Herbst, 2010), may also provide additional insight. Also, teasing out the differences in where students use social networking (e.g., home computer, smartphone) may assist in better understanding the digital divide and whether a second-level analysis should be assumed for this type of study.

Limitations

As in all research, this study has limitations that should be considered when interpreting the findings. First, technology is a dynamic topic, with new technology constantly being developed

and existing technology being phased out. This constant evolution, coupled with a delay in publishing peer-reviewed articles, can present challenges when attempting to conduct a thorough literature review to create the social networking measures used in the questionnaire. To combat this issue, measures directly relating to use of technology (i.e., frequency and proficiency) were given generic descriptions (e.g., social networking) with examples (e.g., Facebook, Twitter, LinkedIn, Instagram) rather than specific platforms given as response options. This allowed for a general picture to be painted, as this degree of specificity is not critical to draw conclusions for this exploratory study.

The reductionist nature of quantitative research can be problematic as it may exclude identities due to small sample sizes (e.g., Native Hawaiian/Pacific Islander) or restrict the fluidity involved in other identities (e.g., gender). Additionally, quantitative research limits the ability to examine identities from an intersectional perspective. Even with a large data set, it was necessary to remove populations from the sample that produced small sample sizes. This does not imply studying marginalized populations is not important, but simply that results must be reduced to provide statistical accuracy. This was a clear delimitation associated with the design of this exploratory study. Future research can better address these concerns now that baseline data is established and a clear evidence trail is laid out indicating that demographic identities associated with gender and race yield statistically meaningful contributions in models.

As an exploratory study, this research examines the relationships between social networking and college student leadership development. Many college student leadership studies point to a large number of typical predictors of educational gains. Although important, those pre-existing variables of influence are not included in this research. This research aims to provide a baseline

and reference point for future research by establishing whether there is any relationship to explore further between social networking usage and leadership development. Thus, a limitation of the study is that the study purposefully excludes previously identified predictors of leadership development. This is intentional, as the study is exploratory and removing these predictors provides clarity on the influence of social networking. To mitigate this limitation, post hoc analysis did allow for high-impact practices to be included, thus strengthening the overall study and explained variance.

This study looked at how people engaged in socially responsible leadership in its entirety (i.e., online and in person). The results do not disaggregate engagement in socially responsible leadership online and in person. The intention was to capture the whole being, assuming some level of congruence between the way one acts online and in person.

In analyzing results, it appeared that having information on the amount of time an individual spent on social networking and for what purpose (e.g., professional, social, educational) could assist in explaining the findings; however, these questions were not asked on the survey. While adding these questions might have been helpful, they might also have contributed to survey fatigue, as the current survey is lengthy, and the information gleaned from what was asked still moves the research forward.

Although data in this study were nested, ordinary least squares (OLS) regression techniques were used instead of multilevel modeling based on decision-making criteria detailed by Astin and Denson (2009) and Niehaus, et al. (2014). Additionally, earlier MSL studies that used similar variables did not yield significant between institution differences when models were run using both OLS and multilevel techniques (Dugan & Associates, 2012; Dugan, et al., 2013;

Dugan, et al., 2012). To alleviate any concerns, interclass correlation (ICC), which serve as an indicator of between-group differences, were calculated for each of the outcome scales and detailed in Table 5.

Scholars have found that lower ICC levels imply a decreased likelihood that differences will present between OLS and multilevel techniques (Hancock & Mueller, 2010; Woltman, et al., 2012). This approach is consistent with other higher education research studies (e.g., Cole, 2011; Cox, et al., 2011; Ethington, 1997; Mayhew, et al., 2012). Additionally, to further address concerns regarding the underestimated standard errors and Type I errors that can arise from analysis of nested data using OLS, more conservative p values (p < .01) were used (Gelman & Hill, 2007).

Conclusion

This study aimed to advance the literature surrounding the interplay of social networking, socially responsible leadership, and social perspective-taking. The need to explore the connection between social networking and socially responsible leadership is important; however, there remains a dearth of evidence from large-scale studies (Ahlquist, 2017; Baek et al., 2012; Papacharissi, 2004). Additionally, increased engagement through social networking (boyd & Ellison, 2007; Glazer-Raymo, 2016; Martínez-Alemán, 2014) suggests there may be additional influences between social networking and the need to engage in social perspective-taking. The lack of literature leaves educators with questions on how to best support college students as they navigate the importance and use of social networking as well as how social networking shapes student experiences.

Social networking is ever-changing and multifaceted. This study confirmed the complexity in that no one socially responsible leadership outcome benefited from all three social networking experiences (i.e., frequency, proficiency, and centrality). Collectively, social networking provides a value-added, consistent, and statistically meaningful contribution to explaining variance in college students' leadership outcomes.

Given the exploratory nature of this research, post hoc analyses were conducted and determined that social networking remained meaningful in the context of high-impact practices. Therefore, while one cannot cleanly state that social networking is entirely positive, negative, or neutral in college experiences, one can say that online experiences matter, and they matter in conjunction with high-impact practices.

The complexity of social networking has altered how modern-day communication happens as well as how communication is studied. Social networking has forced researchers to deepen focus on understanding how, if at all, interactions between people differ online (Avolio & Kahai, 2003; Rosen & Nelson, 2008) from in person. The increased use (i.e., frequency), importance (i.e., centrality), and knowledge (i.e., proficiency) of social networking creates questions on what is currently known about communication as well as how communication is evolving.

It is important to acknowledge and support the evolution that is occurring. This support comes in the form of not only embracing the use of social networking but supporting students during their exploration in intentional ways. Current traditional-aged college students are plagued with labels that assume they are experts in using social networking. While they may be more inclined to understand how to use social networking, they may not understand how it can influence their identity, enhance their classroom experience, or increase their social capital. This

necessary meaning making was exposed as critical in this study, and educators must heed the call

to fill this void.

APPENDIX A

INSTITUTIONAL REVIEW BOARD LETTER OF APPROVAL

LOYOLA
UNIVERSITY CHICAGO
1870
AD · MAIOREM · DEI · GLORIAM

OFFICE OF
RESEARCH SERVICES

Thursday, July 6, 2017

Dear John Dugan,

On Friday, June 30, 2017 the Loyola University Chicago Institutional Review Board (IRB) reviewed and approved your Initial application for the project titled **"Multi-Institutional Study of Leadership 2018 "**. Based on the information you provided, the IRB determined that:

- the risks to subjects are minimized through (i) the utilization of procedures consistent with sound research design and do not unnecessarily expose participants to risk, and (ii) whenever appropriate, the research utilizes procedures already being performed on the subjects for diagnostic or treatment purposes
- the risks to participants are reasonable in relation to anticipated benefits, if any, to participants, and the importance of the knowledge that may reasonably be expected to result
- the selection of subjects is equitable
- informed consent be sought from each prospective subject or the subject's legally authorized representative, in accordance with, and to the extent required by §46.116
- informed consent be appropriately documented, in accordance with, and to the extent required by §46.117
- when appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of subjects
- when appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of data
- when some or all of the subjects are likely to be vulnerable to coercion or undue influence, such as children, prisoners, pregnant women, mentally disabled persons, or economically or educationally disadvantaged persons, additional safeguards have been included in the study to protect the rights and welfare of these subjects

In addition, the IRB determined that documented consent is not required for all participants.
The IRB approved a waiver of documentation of informed consent.

This review procedure, administered by the IRB, in no way absolves you, the researcher, from the obligation to adhere to all Federal, State, and local laws and the Loyola University Chicago policies. Immediately inform the IRB if you would like to change aspects of your approved project (please consult our website for specific instructions). You, the researcher, are respectfully reminded that the University's ability to support its researchers in litigation is dependent upon conformity with continuing approval for their work.

Please notify the IRB of completion of this research and/or departure from the Loyola University Chicago by submitting a Project Closure Report using the CAP system. In all correspondence with the IRB regarding this project, please refer to IRB project number #2328 or IRB application number #4790.
The IRB approval granted for this project expires on **6/30/2018 12:00:00 AM**

If you have any questions regarding this approval, the IRB, or the Loyola University Chicago Human Subject Protection Program, please phone the Assistant Director for Research Compliance at (773) 508-2689 or email the IRB at irb@luc.edu.

Best wishes for your research,

Loretta Stalans

Loretta Stalans, Ph.D.
Vice-Chair, Institutional Review Board

APPENDIX B

MSL PRETEST MEASURES

MSL Pretest Measures

Variable name	Item	Pretest
PRE5a	Hearing differences in opinions enriched my thinking	Controversy with civility
PRE5b	I knew myself pretty well	Consciousness of self
PRE5d	I enjoyed working with others toward common goals	Collaboration
PRE5e	I held myself accountable for responsibilities I agreed to	Commitment
PRE5f	I worked well when I knew the collective values of a group	Common purpose
PRE5g	My behaviors reflected my beliefs	Congruence
PRE5h	I valued the opportunities that allowed me to contribute to my community	Citizenship
PRE6a	I attempted to carefully consider the perspectives of those with whom I disagreed	Social perspective-taking
PRE6b	I regularly thought about how different people might view situations differently	Social perspective-taking
PRE6c	Before criticizing someone, I tried to imagine what it would be like to be in their position	Social perspective-taking

Note. These scales cannot be reproduced without written permission from the principal

investigator of the MSL.

APPENDIX C

FACTOR LOADINGS

Social Networking Centrality Factor Loadings

Social Networking Centrality	Factor Loading
Using social media is part of my everyday activity	.81
I'm proud to tell people I'm on social media	.78
Engaging on social media has become part of my daily routine	.86
I feel out of touch when I haven't logged onto social media in awhile	.82
I feel like I'm part of a community on the social media platform that I use most frequently	.83
I'd feel sorry if my primary social media platform shut down	.78

*Factor Loadings calculated using the subset of data employed in this study.

REFERENCE LIST

Abbas, R., & Mesch, G. (2018). Do rich teens get richer? Facebook use and the link between offline and online social capital among Palestinian youth in Israel. *Information, Communication & Society*, *21*, 63–79. doi:10.1080/1369118X.2016.1261168

Adams, K. A. (2015). *Research methods, statistics, and applications*. Thousand Oaks, CA: SAGE.

Adler, P. S., & Kwon, S. W. (2002). Social capital: Prospects for a new concept. *Academy of Management Review*, *27*, 17–40.

Ahlquist, J. (2014). Trending now: Digital leadership education using social media and the social change model. *Journal of Leadership Studies*, *8*, 57–60.

Ahlquist, J. (2016). The digital identity of student affairs professionals. *New Directions for Student Services.* doi:10.1002/ss.20181

Ahlquist, J. (2017). Digital student leadership development. *New Directions for Student Leadership*, *2017*(153), 47–62. doi:10.1002/yd.20229

Ahn, G. (2011). Digital divides and social network sites: Which students participate in social media? *Journal of Educational Computing Research*, *45*, 147–163.

Ahn, G., Bailenson, J., & Park, D. (2014). Short- and long-term effects of embodied experiences in immersive virtual environments on environmental locus of control and behavior. *Computers in Human Behavior*, *39*, 235–245. doi:10.1016/j.chb.2014.07.025

Aiken, M. (2016). *The cyber effect: A pioneering cyberpsychologist explains how human behavior changes online*. New York: Spiegel & Grau.

Alvarez, C. (2017). Controversy with civility. In Susan Komives, Wendy Wagner, & Associates (Eds.), *Leadership for a better world: Understanding the social change model of leadership development* (pp. 149–171). San Francisco, CA: John Wiley & Sons.

American College Personnel Association and National Association of Student Personnel Administrators, Professional Competencies Task Force. (2015). *Professional competency areas for student affairs educators*. Retrieved from

https://www.naspa.org/images/uploads/main/ACPA_NASPA_Professional_Competencies_FINAL.pdf

Anderson, M., & Jiang, J. (2018, May 31). Teens, social media & technology. Retrieved from http://www.pewinternet.org/2018/05/31/teens-social-media-technology-2018/

Anderson, M., Toor, S., Rainie, L., & Smith, A. (2018, July 11). Activism in the social media age [Web log post]. Retrieved from http://www.pewinternet.org/2018/07/11/activism-in-the-social-media-age/

Antonio, A. L. (2001). The role of interracial interaction in the development of leadership skills and cultural knowledge and understanding. *Research in Higher Education, 42,* 593–617.

Astin, A. W. (1991). *Assessment for excellence*. New York, NY: American Council on Education/Macmillan.

Astin, A. W. (1993). What matters in college. *Liberal Education*, *79*(4), 4–15.

Astin, A. W., & Denson, N. (2009). Multi-campus studies of college impact: Which statistical method is appropriate? *Research in Higher Education, 50*, 354–367.

Astin, A. W., Keup, J. R., & Lindholm, J. A. (2002). A decade of changes in undergraduate education: A national study of system "transformation." *Review of Higher Education*, *25*(2), 141–162.

Astin, A. W., & Lee, J. J. (2003). How risky are one-shot cross-sectional assessments of undergraduate students? *Research in Higher Education*, *44*, 657–672.

Aubrey, J. S., & Rill, L. (2013). Investigating relations between Facebook use and social capital among college undergraduates. *Communication Quarterly*, *61*, 479–496. doi:10.1080/01463373.2013.801869

Avolio, B. J., & Dodge, G. E. (2001). eLeadership: Implications for theory, research, and practice. *Leadership Quarterly*, *11*(4), 615–668.

Avolio, B. J., & Kahai, S. (2003). Adding the "E" to e-Leadership: How it may impact your leadership. *Organizational Dynamics*, *31*(4), 325–338.

Avolio, B. J., & Walumbwa, F. O. (2014). Authentic leadership theory, research and practice: Steps taken and steps that remain. In D. V. Day (Ed.), Oxford handbook of leadership and organizations. New York, NY: Oxford University Press.

Baase, S., & Henry, T. (2017). *A gift of fire: Social, legal, and ethical issues for computing technology* (5th ed.). Upper Saddle River, NJ: Pearson.

Baek, Y. M., Wojcieszak, M., & Delli Carpini, M. X. (2012). Online versus face-to-face deliberation: Who? Why? What? With what effects? *New Media & Society*, *14*(3), 363–383. doi:10.1177/1461444811413191

Barry, W., & Bouvier, G. (2011). Cross-cultural communication: Arab and Welsh students' use of Facebook. *Journal of Arab & Muslim Media Research*, *4*, 165-184.

Bourdieu, P. (2002). The forms of capital. In N. W. Biggart (Ed.), *Readings in economic sociology* (pp. 280–291). Oxford, England: Blackwell. doi:10.1002/9780470755679.ch15

Bowen, W. (2013). *Higher education in the digital age*. Princeton, NJ: Princeton University Press. Retrieved from http://carli.eblib.com/patron/FullRecord.aspx?p=1122596

Bowen, W. G., & McPherson, M. S. (2018). Lesson plan: An agenda for change in American higher education. Princeton, NJ: Princeton University Press.

Bowman, N. A., & Hill, P. L. (2011). Measuring how college affects students: Social desirability and other potential biases in college student self-reported gains. In N. A. Bowman & S. Herzog (Eds.), *Directions in Institutional Research: Vol. 150. Validity and limitations of student self-report* (pp. 73–85).

Bowman, N. A., & Seifert, T. A. (2011). Can college students accurately assess what affects their learning and development? *Journal of College Student Development*, *52*, 270–290.

boyd, d. (2014). *It's complicated: The social lives of networked teens*. New Haven, CT: Yale University Press.

boyd, d., & Ellison, N. (2007). Social network sites: Definition, history, and scholarship. *Journal of Computer-Mediated Communication*, *13*(1), 210–230.

Brass, D. J. (2001). Social capital and organization. In S. J. Zaccaro & R. J. Klimoski (Eds.), *The nature of organizational leadership: Understanding the performance imperatives confronting today's leaders* (pp. 132–152). San Francisco, CA: Jossey Bass.

Cabellon, E. T., & Brown, P. G. (2017). Remixing leadership practices with emerging technologies. *New Directions for Student Leadership*, *2017*(153), 9–20. doi:10.1002/yd.20226

Chen, B., & Marcus, J. (2012). Students' self-presentation on Facebook: An examination of personality and self-construal factors. *Computers in Human Behavior*, *28*(6), 2091–2099. doi:10.1016/j.chb.2012.06.013

Chickering, A. W. (1969). *Education and identity*. San Francisco, CA: Jossey-Bass.

Cole, D. (2011). Debunking anti-intellectualism: An examination of African American college students' intellectual self-concepts. *Review of Higher Education, 34*, 259–282.

Coleman, J. S. (1994). The realization of effective norms. In R. Collins (Ed.), *Four Sociological Traditions: Selected Readings*, (pp. 171–189). New York: Oxford University Press.

Council for the Advancement of Standards in Higher Education. (2009). The role of leadership programs for students: CAS standards contextual statement. *CAS professional standards for higher education.* Washington, DC: Author.

Couper, M. P. (2000). Review: Web surveys; A review of issues and approaches. *Public Opinion Quarterly*, *64*(4), 464–494.

Cox, B. E., McIntosh, K. L., Reason, R. D., & Terenzini, P. T. (2011). A culture of teaching: Policy, perception, and practice in higher education. *Research in Higher Education, 52,* 808–829.

Crawford, S. D., Couper, M. P., & Lamias, M. J. (2001). Web surveys: Perceptions of burden. *Social Science Computer Review*, *19*(2), 146–162. doi:10.1177/089443930101900202

Day, D. V., Harrison, M. M., & Halpin, S. M. (2012). *An integrative approach to leader development: Connecting adult development, identity, and expertise*. New York, NY: Routledge.

De Abreu, B. (2010). Changing technology: Empowering students through media literacy education. *New Horizons in Education*, *58*(3), 26–33.

Dey, E. L., Ott, M. C., Antonaros, M., Barnhardt, C. L., & Holsapple, M. A. (2010). *Engaging diverse viewpoints: What is the campus climate for perspective-taking?* Washington, DC: Association of American Colleges and Universities.

Dugan, J. P. (2011a). Pervasive myths in leadership development: Unpacking constraints on leadership learning. *Journal of Leadership Studies*, *5*(2), 79–84. doi:10.1002/jls.20223

Dugan, J. P. (2011b). Students' involvement in group experiences and connections to leadership development. *New Directions for Institutional Research*, *2011*(S1), 17–32.

Dugan, J. P. (2015). The measurement of socially responsible leadership: Considerations in establishing psychometric rigor. *Educational, Cultural and Psychological Studies*, *2015*(12), 23–42. doi:10.7358/ecps-2015-012-duga

Dugan, J. P. (2016). *ELPS 505: Seminar in Leadership Theory.* Syllabus, School of Education, Loyola University Chicago, Chicago, IL.

Dugan, J. P. (2017). *Leadership theory: Cultivating critical perspectives* (1st ed.). San Francisco, CA: Jossey-Bass.

Dugan, J. P., & Associates. (2012). *Multi-institutional study of leadership 2012: Institutional reports.* College Park, MD: National Clearinghouse for Leadership Programs.

Dugan, J. P., Bohle, C. W., Gebhardt, M., Hofert, M., Wilk, E., & Cooney, M. A. (2011). Influences of leadership program participation on students' capacities for socially responsible leadership. *Journal of Student Affairs Research and Practice*, *48*(1), 65–84.

Dugan, J. P., Bohle, C. W., Woelker, L. R., & Cooney, M. A. (2014). The role of social perspective-taking in developing students' leadership capacities. *Journal of Student Affairs Research and Practice*, *51*(1), 1–15. doi:10.1515/jsarp-2014-0001

Dugan, J. P., Fath, K. Q., Howes, S. D., Lavelle, K. R., & Polanin, J. R. (2013). Developing the leadership capacity and leader efficacy of college women in science, technology, engineering, and math fields. *Journal of Leadership Studies, 7*(3), 6–23.

Dugan, J. P., Kodama, C., Correia, B., & Associates. (2013). Multi-Institutional Study of Leadership insight report: Leadership program delivery.

Dugan, J. P., Kodama, C. M., & Gebhardt, M. C. (2012). Race and leadership development among college students: The additive value of collective racial esteem. *Journal of Diversity in Higher Education*, *5*(3), 174 –189.

Dugan, J. P., & Komives, S. R. (2010). Influences on college students' capacities for socially responsible leadership. *Journal of College Student Development*, *51*(5), 525–549. doi:10.1353/csd.2010.0009

Dugan, J. P., Rossetti Morosini, A. M., & Beazley, M. R. (2011). Cultural transferability of socially responsible leadership: Findings from the United States and Mexico. *Journal of College Student Development, 52*, 456–474.

Ellison, N., Gray, R., Lampe, C., & Fiore, A. (2014). Social capital and resource requests on Facebook. *New Media & Society*, *16*, 1104-1121. doi:10.1177/1461444814543998

Ellison, N., Steinfield, C., & Lampe, C. (2007). The benefits of Facebook "friends": Social capital and college students' use of online social network sites. *Journal of Computer-Mediated Communication*, *12*(4), 1143–1168. doi:10.1111/j.1083-6101.2007.00367.x

Ethington, C. A. (1997). A hierarchical linear modeling approach to studying college effects. In J. C. Smart (Ed.), *Higher education: Handbook of theory and research* (Vol. 12, pp. 165–194). New York, NY: Agatha Press.

Galinsky, A. D., Jordan, J., & Sivanathan, N. (2008). Harnessing power to capture leadership. *Leadership at the Crossroads*, *1*, 283–299.

Galinsky, A., Ku, G., & Wang, C. (2005). Perspective-taking and self-other overlap: Fostering social bonds and facilitating social coordination. *Group Processes & Intergroup Relations*, *8*(2), 109–124. doi:10.1177/1368430205051060

Gardner, W. L., Avolio, B. J., & Walumbwa, F. O. (Eds.). (2005). *Authentic Leadership Theory and Practice: Vol. 3. Origins, effects and development*. Amsterdam, Netherlands: Emerald Group.

Gehlbach, H. (2004). A new perspective on perspective-taking: A multidimensional approach to conceptualizing an aptitude. *Educational Psychology Review*, *16*(3), 207–234.

Gehlbach, H., Marietta, G., King, A. M., Karutz, C., Bailenson, J. N., & Dede, C. (2015). Many ways to walk a mile in another's moccasins: Type of social perspective-taking and its effect on negotiation outcomes. *Computers in Human Behavior*, *52*, 523–532. doi:10.1016/j.chb.2014.12.035

Gelman, A., & Hill, J. (2007). *Data analysis using regression and multilevel/hierarchical models*. New York, NY: Cambridge University Press.

Gikas, J., & Grant, M. M. (2012). Mobile computing devices in higher education: Student perspectives on learning with cellphones, smartphones & social media. *The Internet and Higher Education*, *19*, 18–26. doi:10.1016/j.iheduc.2013.06.002

Gismondi, A., & Osteen, L. (2017). Student activism in the technology age. *New Directions for Student Leadership*, *2017*(153), 63–74. doi:10.1002/yd.20230

Glazer-Raymo, J. (2016). Social media in higher education. *ASHE Higher Education Report*, *42*. San Francisco, CA: John Wiley.

Rowan-Kenyon, H.T.; Martínez Alemán, A.M.; Gin, K.; Blakeley, B.; Gismondi, A.; Lewis, J.; McCready, A.; Zepp, D.; Knight, S. Social Media in Higher Education; ASHE Higher Education Report; John Wiley: San Francisco, CA, USA, 2016; Volume 42.

Gonyea, R. M. (2005). Self-reported data in institutional research: Review and recommendations. *New Directions for Institutional Research*, *127,* 73–89.

Greenhow, C. (2010). New concept of citizenship for the digital age. *Learning & Leading with Technology*, *37*(6), 24–25.

Greenhow, C. (2011). Youth, learning, and social media. *Journal of Educational Computing Research*, *45*(2), 139–146. doi:10.2190/EC.45.2.a

Guidry, K. R., & Ahlquist, J. (2016). Computer-mediated communication and social media. In G. S. McClellan, J. Stringer, & Associates (Eds.), *The handbook of student affairs administration* (4th ed., pp. 595–611). San Francisco, CA: Jossey-Bass.

Hancock, G. R., & Mueller, R. O. (2010). *The reviewer's guide to quantitative methods on the social sciences.* New York, NY: Routledge.

Hargittai, E. (2010). Digital na(t)ives? Variation in internet skills and uses among members of the "net generation." *Sociological Inquiry*, *80*(1), 92–113. doi:10.1111/j.1475-682X.2009.00317.x

Herbst, S. (2010). *Rude democracy: Civility and incivility in American politics*. Philadelphia, PA.

Herzog, S., & Bowman, N. A. (Eds.). (2011). Validity and limitations of student self-report data. *New Directions for Institutional Research*, 150, pp. 59–72). San Francisco, CA: Jossey-Bass.

Higher Education Research Institute. (1996). *A social change model of leadership development: Guidebook version III*. College Park, MD: National Clearinghouse for Leadership Programs.

Hill, K. A., & Hughes, J. E. (1998). *Cyberpolitics: Citizen activism in the age of the Internet*. Lanham, MD: Rowman & Littlefield.

Hoffman, J. L., & Vorhies, C. (2017). Leadership 2.0: The impact of technology on leadership development. *New Directions for Student Leadership*, *2017*(153), 21–33.

Howard, G. S. (1980). Response shift bias: A problem in evaluating interventions with pre/post self-reports. *Evaluation Review*, *4,* 93–106.

Howard, G. S., & Dailey, P. R. (1979). Response-shift bias: A source of contamination in self-report measures. *Journal of Applied Psychology*, *64*, 144–150.

Johnson, D. W. (1975). Cooperativeness and social perspective-taking. *Journal of Personality and Social Psychology*, *31*(2), 241–244. doi:10.1037/h0076285

Johnson, M. R., Dugan, J. P., & Soria, K. M. (2017). "Try to see it my way": What influences social perspective-taking among college students? *Journal of College Student Development*, *58*(7), 1035–1054. doi:10.1353/csd.2017.0082

Junco, R. (2014). *Engaging students through social media: Evidence-based practices for use in student affairs*. USA: National Association of Student Personnel Administrators.

Junco, R., Merson, D., & Salter, D. W. (2010). The effect of gender, ethnicity, and income on college students' use of communication technologies. *CyberPsychology, Behavior & Social Networking*, *13*(6), 619–627. doi:10.1089/cyber.2009.0357

Kerkoff, A. M. & Ostick, D. (2017). Commitment. In Susan Komives, Wendy Wagner, & Associates (Eds.), *Leadership for a better world: Understanding the social change model of leadership development* (pp. 87–105). San Francisco: CA: John Wiley & Sons.

Kezar, A., & Moriarty, D. (2000). Expanding our understanding of student leadership development: A study exploring gender and ethnic identity. *Journal of College Student Development, 41*(1), 55-69.

Kilgo, C. A., Ezell Sheets, J. K., & Pascarella, E. T. (2015). The link between high-impact practices and student learning: Some longitudinal evidence. *Higher Education*, *69*(4), 509–525. doi:10.1007/s10734-014-9788-z

Kodama, C., & Dugan, J. P. (2013). Leveraging leadership efficacy in college students: Disaggregating data to examine unique predictors by race. *Equity & Excellence in Education*, *46,* 184–201.

Komives, S. R., Lucas, N., & McMahon, T. R. (2013). *Exploring leadership: For college students who want to make a difference*. San Francisco: CA: John Wiley & Sons.

Komives, S. R. & Wagner, W. (2009). *Leadership for a better world: Understanding the social change model of leadership development*. San Francisco, CA: Jossey-Bass.

Komives, S. R. & Wagner, W. (2017). *Leadership for a better world: Understanding the social change model of leadership development* (2nd ed.). San Francisco, CA: John Wiley & Sons.

Kuh, G. D. (2008). Excerpt from high-impact educational practices: What they are, who has access to them, and why they matter. *Association of American Colleges and Universities*, pp.19–34.

LaRiviere, K., Snider, J., Stromberg, A., & O'Meara, K. (2012). Protest: Critical lessons of using digital media for social change. *About Campus*, *17*(3), 10–17.

Loury, G. (1977). A dynamic theory of racial income differences. In *Women, Minorities, and Employment Discrimination* (pp. 153–86). Lexington, MA: Lexington Books.

Martínez-Alemán, A. M. (2014). Social media go to college. *Change: The Magazine of Higher Learning*, *46*(1), 13–20. doi:10.1080/00091383.2014.867203

Mayhew, M. J., Seifert, T. A., & Pascarella, E. T. (2012). How the first year of college influences moral reasoning development for students in moral consolidation and moral transition. *Journal of College Student Development, 53*, 19–40.

McCallum, S., & O'Connell, D. (2009). Social capital and leadership development: Building stronger leadership through enhanced relational skills. *Leadership & Organization Development Journal, 30*(2), 152–166.

McWilliams, J., Hickey, D. T., Hines, M. B., Conner, J. M., & Bishop, S. C. (2010). Voices from the field: Using collaborative writing tools for literary analysis; Twitter, fan fiction and *The Crucible* in the secondary English classroom. *Journal of Media Literacy Education*, *2*(3), 238–245.

Mesch, G. S. (2012). Minority status and the use of computer-mediated communication: A test of the social diversification hypothesis. *Communication Research*, *39*(3), 317–337.

Ng, W. (2012). Can we teach digital natives digital literacy? *Computers & Education*, *59*, 1065–1078.

Niehaus, E., Campbell, C. M., & Inkelas, K. K. (2014). HLM behind the curtain: Unveiling decisions behind the use and interpretation of HLM in higher education research. *Research in Higher Education, 55*, 101–122.

Ono, H., & Zavodny, M. (2008). Immigrants, English ability and the digital divide. *Social Forces*, *86*(4), 1455–1479. doi:10.1353/sof.0.0052

Owen, J. E. (2012). *Findings from the Multi-institutional Study of Leadership institutional survey: A national report*. College Park, MD: National Clearinghouse for Leadership Programs.

Pallant, J. (2007). *SPSS survival manual: A step by step guide to data analysis using SPSS for Windows* (3rd ed.). New York, NY: Open University Press.

Papacharissi, Z. (2004). Democracy online: Civility, politeness, and the democratic potential of online political discussion groups. *New Media & Society*, *6*(2), 259–283. doi:10.1177/1461444804041444

Pascarella, E. T., & Terenzini, P. T. (2005). *How college affects students: A third decade of research* (Vol. 2). San Francisco, CA: Jossey-Bass.

Porter, S. R. (2011). Do college student surveys have any validity? *Review of Higher Education*, *35*, 45–76.

Prenksy, M. (2001). Digital natives, digital immigrants. *On the Horizon*, *9*(5), 1–6.

Ribble, M., Bailey, G., & Ross, T. (2004). Digital citizenship: Focus questions for implementation. *Learning & Leading with Technology*, *32*(2), 12–15.

Rohs, F. R. (2002). Improving the evaluation of leadership programs: Control response shift. *Journal of Leadership Education*, *1*(2), 1–12.

Rohs, F. R., & Langone, C. A. (1997). Increased accuracy in measuring leadership impacts. *Journal of Leadership Studies*, *4*(1), 150–158.

Ronson, J. (2015). *So you've been publicly shamed*. New York, NY: Penguin.

Rosen, D., & Nelson, C. (2008). Web 2.0: A new generation of learners and education. *Computers in the Schools*, *25*(3–4), 211–225. doi:10.1080/07380560802370997

Seemiller, C., & Grace, M. (2016). *Generation Z goes to college* (1st ed.). San Francisco, CA: Jossey-Bass.

Smith, A., & Anderson, M. (2018, March 1). Social media use in 2018 [Web log post]. Retrieved from http://www.pewinternet.org/2018/03/01/social-media-use-in-2018/

Sobieraj, S., & Berry, J. M. (2011). From incivility to outrage: Political discourse in blogs, talk radio, and cable news. *Political Communication*, *28*(1), 19–41. doi:10.1080/10584609.2010.542360

Stearns, P. N. (2009). *Educating global citizens in colleges and universities: Challenges and opportunities*. New York, NY: Routledge. doi:10.4324/9780203885185

Steinfield, C., Ellison, N. B., & Lampe, C. (2008). Social capital, self-esteem, and use of online social network sites: A longitudinal analysis. *Journal of Applied Developmental Psychology*, *29*(6), 434–445. doi:10.1016/j.appdev.2008.07.002

Suler, J. (2004). The online disinhibition effect. *CyberPsychology & Behavior*, *7*(3), 321–326. doi:10.1089/1094931041291295

Tabachnick, B. G., Fidell, L. S., & Ullman, J. B. (2007). *Using multivariate statistics* (Vol. 5). Boston, MA: Pearson.

Thomas, N. (2010). *Educating for Deliberative Democracy: New Directions for Higher Education, Number 152* (Vol. 102). San Francisco, CA: John Wiley & Sons.

Thelin, J. R. & Gasman, M. (2016). Historical overview of American higher education. In J. Schuh, S. R. Jones, & V. Torres (Eds.), *Student services: A handbook for the profession* (pp. 3–19). San Francisco, CA: Jossey-Bass.

Tidwell, L. C., & Walther, J. B. (2002). Computer- mediated communication effects on disclosure, impressions, and interpersonal evaluations: Getting to know one another a bit at a time. *Human Communication Research*, *28*(3), 317–348. doi:10.1111/j.1468-2958.2002.tb00811.x

Trepte, S., Masur, P., Schmidt, J., Taddicken, M., Walther, J., Yao, M., & Ziegele, M. (2016). *Cultural differences in social media use, privacy, and self-disclosure*. Retrieved from University of Hohenheim website: http://opus.uni-hohenheim.de/volltexte/2016/1218/pdf/Trepte_Masur_ResearchReport.pdf

Twenge, J. (2017). *iGen: Why today's super-connected kids are growing up less rebellious, more tolerant, less happy—and completely unprepared for adulthood*. New York, NY: Atria Books.

Tyree, T. M. (1998). Designing an instrument to measure socially responsible leadership using the social change model of leadership development. *Dissertation Abstracts International, 59*(6), 1945.

Walther, J. B., & Braithewaite, L. (2008). *Engaging Theories in Interpersonal Communication: Multiple Perspectives*. Thousand Oaks, CA: SAGE.

Woltman, H., Feldstain, A., MacKay, J. C., & Rocchi, M. (2012). An introduction to hierarchical linear modeling. *Tutorials in Quantitative Methods for Psychology, 8,* 52–69.

Żuromski, D., Fedyniuk, A., & Marek, E. M. (2018). Can new technologies make us more human? An inquiry on VR technologies in social cognition. *Frontiers in Psychology*, *9*. doi:10.3389/fpsyg.2018.00705

VITA

Michelle L. Kusel was born and raised in the suburbs of Chicago. Dr. Kusel earned a Bachelor of Science degree from Marquette University in Industrial Engineering Management. Upon graduation, Dr. Kusel worked in Corporate America for five years before enrolling at Loyola University Chicago for her M.Ed. in Higher Education. During her time as a graduate student, she was a member of the Multi-Institutional Study of Leadership where her research focused on trans* student experiences. Dr. Kusel began her career in Higher Education at Elon University in Elon, North Carolina, where she served as the Assistant Director of Leadership. She later returned to Chicago to work in the Center for Experiential Learning at Loyola University Chicago as the Academic Internship Program Manager and Learning Portfolio Manager. In Fall 2016, she began her Ph.D. journey at Loyola University Chicago in the School of Education while coordinating the Undergraduate Leadership Studies Minor and serving as an adjunct professor in the minor for seven semesters. Additionally, Dr. Kusel has been the project manager for the Multi-institutional Study of Leadership, interfacing with over 70 schools internationally. Dr. Kusel has been recognized nationally for her work as a practitioner and scholar, namely through the American Educational Research Association's *Research Article of the Year* as well as through ACPA's *Emerging Professional Annuit Coeptis* award.