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LEADER EFFICACY PERCEPTIONS AND ENGAGEMENT IN SELF-DIRECTED PROFESSIONAL DEVELOPMENT

by

Lauren Noelle Johnson

Dissertation

Submitted to the Faculty of

Olivet Nazarene University

School of Graduate and Continuing Studies

in Partial Fulfillment of the Requirements for

the Degree of

Doctor of Education

in

Ethical Leadership

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SIGNATURE PAGE

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ABSTRACT

Rapidly changing environments force organizations to adapt quickly to remain relevant. However, a given organization's ability to adapt depends largely on its leaders' ability to guide and direct their subordinates in the use of the organization's resources. Research has identified self-directed professional development (SDPD) as a critical component of leaders' ability to meet the challenges of adaptation, but notably absent from the literature are explorations of how leaders' self-perception relates to the degree to which they engage in SDPD. The purpose of this quantitative study was to deepen current understandings of the interplay between self-perception and individual behavior in the organizational setting, specifically through administration of the *Leader Efficacy Questionnaire* and assessment of SDPD participation and attitudes of 120 organizational leaders with a view to exploring the relationship between leader self-efficacy and engagement in SDPD as well as any variables that could moderate such a relationship. Multiple regression analysis of participants' responses produced the statistically significant finding that leader self-efficacy had no bearing on participation in SDPD activities, but that positive attitudes toward SDPD could predict high levels of leader self-efficacy. Highly efficacious leaders are thus more likely to believe in the value of lifelong learning, but self-reported participation in SDPD may fall outside the scope of individual behaviors that can predict perceptions of self-efficacy. Accordingly, the study's findings call for further exploration of how leaders' self-perceptions can be channeled for the benefit of their organization.

TABLE OF CONTENTS

Chapter		Page
I.	INTRODUCTION……...…...1	
	Statement of the Problem…….3	
	Background……..5	
	Research Questions……..8	
	Description of Terms……...9	
	Significance of the Study……...10	
	Process to Accomplish……...12	
	Summary……17	
II.	REVIEW OF THE LITERATURE……...18	
	Introduction……18	
	Functional Leadership Theory, Organizational Leadership, and Human Capital Theory……..…….19	
	Professional Development……...……...22	
	Self-Efficacy……..32	
	Leader Self-Efficacy: Definitions and Measures……...41	
	Conclusion…….47	
	Summary……48	

Chapter Page

III. METHODOLOGY……49

Introduction……49

Research Design……50

Participants……54

Data Collection..……56

Analytical Methods……60

Limitations……62

Summary……65

IV. FINDINGS AND CONCLUSIONS……66

Introduction……66

Findings……67

Conclusions……76

Implications and Recommendations……77

REFERENCES……..85

APPENDICES

A. Permission for Use: Leasers Efficacy Questionnaire...……...111

B. Permission for Use: Self-Assessment Attitude Statements...……..113

C. Self-Directed Professional Development Inventory....……...118

D. Solicitation for Survey Participants Email...……...……121

LIST OF TABLES

Table Page

1. Distribution of Participant Scores on the Leader Efficacy Questionnaire…….....68

2. Participants' Self-Reported Participation in Self-Directed Professional Development Activities over the Past Year...…….....…….....69

3. Participants' Responses to Attitude Statements Related to Self-Directed Professional Development...…….....…….....…….....70

4. Multiple Regression Analysis Predicting Leader Self-Efficacy from Participation in Self-Directed Professional Development and from Self-Directed Professional Development……..71

5. Number of Years of Post-High School Professional Experience and Number of Years in Current Professional Role as Reported by Participants……...73

6. Last Completed Level of Education….....…….…….…75

7. Multiple Regression Analysis of Proposed Moderators of the Relationship between Leader Self-Efficacy and Attitude toward Self-Directed Professional Development…….76

CHAPTER I

INTRODUCTION

In the late 1990s, the notion of a business environment characterized by volatility, uncertainty, complexity, and ambiguity (VUCA) began to take hold. The concept of VUCA was first introduced by the United States Army War College to refer to the multilateral world that emerged after the end of the Cold War (Kingsinger & Walch, 2012). The idea of VUCA has since been adopted by the business sector to describe an operating environment that has become increasingly unpredictable (Kingsinger & Walch). This unpredictability creates additional obstacles to long term sustainability for organizations. The burden of generating the outcomes that result in solvency and sustainability falls directly on the shoulders of organizational leaders who are charged with prioritizing objectives for subordinates and providing guidance towards achieving the overall vision of the organization. For this reason, the human aspect of organizational functionality, the motivations behind the individuals who power an organization towards its vision are, of great importance. Prior scholarly work has indicated that self-perception is a motivating factor behind individual action (Pajares, 2002). One way to explore this relationship among organizational leaders is to measure how individuals view their leadership ability and what, if any, relationship that view has on their attitudes and participation in professional development activities.

Research affirms that one of the best decisions that a leader can make is to invest in his or her own development (Boyce, Zaccaro, & Wisecarver, 2010; Orvis & Ratwani, 2010; Reichard & Johnson, 2011). Self-directed professional development requires individuals to take on "the primary responsibility for planning, carrying out, and evaluating their own learning experiences" (Ellinger, 2004, p.159). Leader self-directed professional development focuses specifically on learning experiences in which leaders take primary responsibility for growth in their own capacities and conduct (Boyce et al.). In essence, the leader decides what knowledge and skills he or she needs to gain and then determines the pathway that best facilitates development in these areas. This development can occur through a number of outlets, such as job experiences, seminar courses, workshops, or professional conferences (Noe & Wilk, 1993). A key criterion for leader self-directed professional development is that it must be initiated by the leader and not formally required by the organization or the leader's immediate supervisor (Maurer & Tarulli, 1994).

Despite the growing need for self-directed professional development, few studies have focused specifically on leader engagement in these activities. In fact, the research on more general self-directed professional development is relatively sparse (Maurer, Weiss, & Barbeite, 2003), and the research that does exist has focused primarily on the conditions that encourage an individual to participate in such activities (Boyce et al., 2010). Hurtz and Williams (2009), for example, found that the largest impact on general employee participation in self-directed professional development was simply the recognized availability of activities. The results of their study suggested that employees who felt that self-directed professional development would be enjoyable, worthwhile, and

would lead to desired outcomes were almost certain to indicate that they would participate in future activities. With contextual factors so firmly in place, a logical progression is the exploration of self-perception and its role in engagement in activities related to self-directed professional development.

To begin this exploration, one must first understand the role that self-perception plays in human behavior. Self-efficacy is the belief that one has the personal capabilities and resources to meet the demands of a specific task (Bandura, 1977b). These perceptions help individuals determine what to do with their knowledge and skills. For this reason, human behavior can often be better predicted by the beliefs individuals hold about their capabilities than by what they are actually capable of accomplishing (Pajares, 2002). Belief and reality often differ. As a result, the accomplishments of individuals are generally better predicted by their self-efficacy beliefs than by their previous attainments, knowledge, or skills (Bandura, 1982; Locke, Frederick, Lee & Bobko, 1984; Pajares; Schunk, 1989). Recognizing the central role played by self-awareness and perception in regard to human behavior, a valuable line of inquiry is to extend this course of reasoning to the intrapersonal antecedents of participation in professional learning activities as related to organizational leaders.

Statement of the Problem

Ongoing professional development through participation in self-directed professional development activities is an essential part of effective leadership (Birdi, Allan, & Warr, 1997; Boyce et al., 2010; Maurer, Mitchell & Barbeite, 2002; Maurer & Tarulli, 1994; Noe & Wilk, 1993; Orvis & Ratwani, 2010). Studies have noted that employees who participate in self-directed professional development activities are more

productive and effective (Bass, 1990; House & Aditya, 1997; McCormick, Tanguma, & López-Forment, 2002; Northouse, 2001; Orvis & Ratwani; Yukl & Van Fleet, 1992).

As a result, organizations are recognizing that to be competitive, they must promote and rely on their leaders to engage in self-directed learning (Ellinger, Yang, & Howton, 2002). The recognition of the importance of self-directed learning has led to extensive research focused on exploring the value of organizations creating and supporting professional development opportunities for their leaders (Antonacopoulou, 2000; Ellinger et al.; Reichard & Johnson, 2011; Temporal, 1984; Van Velsor, Moxley & Bunker, 2004). Additionally, a vast array of researchers have dedicated their efforts towards delineating the far-reaching organizational benefits of leader participation in such activities (Birdi et al.; Boyce et al.; Maurer et al.; Maurer & Tarulli; Noe & Wilk; Orvis & Ratwani). However, a key component of self-directed professional development is engagement on an individual level. Without the engagement of individuals, the organizational effort towards creating and supporting such opportunities would be wasted (Boyce et al.).

An investigation of the potential relationship between an individual's self-perceived professional proficiency and said individual's belief in his or her need for, and subsequent participation in, ongoing professional development opportunities is noticeably lacking within the existing literature. The necessity of fully developed, well-equipped leaders within the organizational space demands an exploration into the factors that are involved in an organizational leader's decision to fully engage in practices that have been shown to be beneficial. The purpose of this research study was to explore the relationship between leader self-efficacy and engagement in self-directed professional development in

order to gain a better understanding of the influence of self-perception on individual behavior within an organizational setting.

Background

To many, the terms *leadership* and *confidence* are inextricably bound together. In fact, one of the most reported findings in the leadership literature is the relationship between a leader's self-confidence and successful leadership (Bass, 1990; House & Aditya, 1997; McCormick, Tanguma, & Sohn, 2002; Northouse, 2001; Yukl & Van Fleet, 1992). It should be noted, however, that confidence is a colloquial term that is often used within the common parlance to describe self-efficacy. As leading self-efficacy theorist Bandura (1997d) wrote: "Confidence is a nondescript term that refers to strength of belief, but does not necessarily specify what the certainty is about" (p. 2). One who uses the term *confidence* is seeking to convey the strength of an individual's sense of personal agency. Therefore, while the term *confidence* is often used colloquially as a synonym for self-efficacy as well as occasionally within the literature, a study of the interaction between personal agency and leadership behaviors should focus on the theory-based construct of self-efficacy, which has identified antecedents and validated procedures for measurement (Bandura).

For the sake of clarity, within the context of the current study, leader confidence has been measured using the construct of self-efficacy. This construct, the belief that one has the personal capabilities and resources to meet the demands of a specific task, was first introduced by Bandura (1977a). Bandura contended that self-efficacy beliefs play a critical role in human functioning, stating that "people's level of motivation, affective states, and actions are based more on what they believe than on what is objectively

true" (p. 2). Bandura (1997a) asserted that self-efficacy beliefs influence the choices people make and the courses of action they pursue. Self-efficacy beliefs also help determine how much effort people will expend on an activity, how long they will persevere when confronting obstacles, and how resilient they will be in the face of adverse situations (Bandura, 1997b; Pajares, 2002).

Within the context of leadership, self-efficacy beliefs play a critical role in an individual's ability to cope with environmental demands. Expanding upon the original construct, leader self-efficacy is defined as a leader's beliefs in his or her perceived capabilities to organize the positive psychological capabilities, motivation, means, collective resources, and courses of action required to attain effective, sustainable performance across the individual's various leadership roles, demands, and contexts (Hannah, Avolio, Luthans, & Harms, 2008). Found within existing literature are the antecedents of leader self-efficacy, which include the traits of extraversion, conscientiousness, openness to experience, and prior experience (Mellor, Barclay, Bulger, & Kath, 2006). In terms of external factors, leader self-efficacy has been associated with positions that have higher levels of encouragement from current leaders as well as higher levels of job autonomy, resource supply, and organizational support for change (Mellor et al.).

Rapidly changing environments require organizations to adapt quickly to remain relevant within their sphere of influence, and the onus for navigating the organization through difficult times is placed upon organizational leaders. Technological advancements, globalization, and shifting organizational structures have created a greater demand for effective methods of enhancing human capital while changing how the

professional performance of leaders is evaluated; placing greater responsibility for professional growth on organizational leaders (Ellinger, 2004; Van Velsor, et al., 2004).

As a result of environmental shifts and increased expectations surrounding leader performance, organizational leaders are tasked with taking the necessary steps to ensure that they are in a position to help their organizations achieve its objectives, both now and in the future (Boyce et al., 2010). One of the ways that organizational leaders can maintain and enhance their leadership effectiveness is by engaging in ongoing improvement through participation in self-directed professional development activities designed to enhance or create skills within their area of influence. As self-efficacy beliefs have been linked within the literature to the level of effort expended for certain activities, the next logical step would be to explore how leader self-efficacy relates to the amount of effort dedicated toward self-directed professional development activities on the part of organizational leaders (Pajares, 2002).

While it has clearly been established that time, resources, and organizational encouragement are linked to participation in self-directed professional development activities in general (Hurtz & Williams, 2009), the existing literature lacks an exploration of the potential relationship between the efficacy perceptions of an established leader and the likelihood that he or she will participate in such activities. The possible relationship between leader efficacy and participation in self-directed professional development activities has potentially far-reaching implications within organizational settings. For example, is it possible that leaders may perceive themselves to already possess the necessary qualities to be successful in their role and therefore do not see any need to seek formal opportunities to develop their professional capacities (Reichard & Johnson,

2011)? Alternatively, could an individual be motivated to take formal action to develop his or her professional skill set due to a self-perceived deficit in this area (Reichard & Johnson)?

The existing literature regarding leader self-directed professional development and leader self-efficacy is far from exhaustive; however, more attention has been paid to defining and identifying the individual contextual antecedents of these concepts (Birdi et al., 1997; Maurer & Tarulli, 1994; Noe & Wilk, 1993). This research study sought to understand whether there is a point where leaders' belief that they already possess the qualities and skills necessary to be successful correlates with their engagement in activities designed to cultivate their professional capacities.

Research Questions

1. What is the relationship between leader self-efficacy, attitudes toward self-directed professional development activities, and participation in leader self-directed professional development activities?
2. To what extent is the relationship between leader self-efficacy, attitudes toward self-directed professional development activities, and participation in leader self-directed professional development activities moderated by gender?
3. To what extent is the relationship between leader self-efficacy, attitudes toward self-directed professional development activities, and participation in leader self-directed professional development activities moderated by professional experience?
4. To what extent is the relationship between leader self-efficacy, attitudes toward self-directed professional development activities, and participation in leader self-directed professional development activities moderated by education level?

Description of Terms

Engagement. For the purposes of this study, engagement is defined as the combination of attitudes towards self-directed professional development and participation in self-directed professional development activities (Hurtz & Williams, 2009; Noe, 1986).

Leadership. For the purposes of this study, leadership is defined as the process of influencing the activities of an organized group in its efforts toward goal setting and goal achievement (Stogdill, 1950).

Organizational leader. For the purposes of this study, organizational leaders are defined as individuals who prioritize objectives for subordinates and provide guidance toward achieving the overall vision of the organization ("Organizational leadership", n.d.).

Leader self-efficacy. For the purposes of this study, leader self-efficacy is defined as leaders' belief in "their perceived capabilities to organize the positive psychological capabilities, motivation, means, collective resources, and courses of action required to attain effective, sustainable performance across their various leadership roles, demands, and contexts" (Hannah et al., 2008, p. 670).

Leader action self-efficacy. This term refers to a leader's perceived ability to execute critical leader actions, such as motivating and coaching followers, in an effective manner (Hannah & Avolio, 2013).

Leader self-regulation efficacy. This term refers to a leader's perceived capability to think through complex leadership situations, generate effective solutions, and enact those solutions through effective leadership (Hannah & Avolio, 2013).

Leader means efficacy. This term refers to leaders' belief that they can draw upon peers, senior leaders, and followers to enhance their leadership, and that the policies and procedures of their organization can be leveraged to positively impact their leadership (Hannah & Avolio, 2013).

Self-directed professional development. For the purposes of this study, self-directed professional development focuses specifically on learning experiences in which organizational leaders take primary responsibility for the knowledge and skills he or she needs to gain in order to be successful in their area of influence and then determines the pathway that best facilitates development in these areas (Boyce et al., 2010).

Self-directed professional development activity. The outlet through which self-directed professional development occurs such as job experiences, seminar courses, workshops, or professional conferences (Noe & Wilk, 1993).

Significance of the Study

The goal of this explorative study was to understand the extent to which leader self-perception relates to individual action in the area of self-directed professional development. The practical benefit to organizations is a greater understanding of how self-perceived ability relates to ongoing learning among leaders. The true value of this study is found in its contribution to the literature surrounding the potential factors that may influence an organizational leader's decision to self-seek further professional development. The current study contributes to the existing self-directed professional development literature by shifting the focus from contextual factors and personality traits to self-perception and how individuals' assessment of their abilities impacts, participation in opportunities for skill enhancement (Hannah et al., 2008; Hurtz & Williams, 2009;

Maurer & Tarulli, 1994; Noe & Wilk, 1993). Overall, the results of this study are beneficial to a business community that must continue to cultivate and encourage its leaders and the individual leaders themselves who must recognize and adapt to diverse and constantly evolving demands to the best of their abilities.

The unpredictable operating environment brought on by a VUCA world causes the human aspect of organizational functionality to take center stage (Kingsinger & Walch, 2012). In the search for a formula to produce quality leaders able to meet the challenges of such an environment head on, ongoing engagement in self-directed professional development has emerged as best practice not only for organizations that seek to cultivate and retain strong leadership, but also for individuals leaders who seek to distinguish themselves within an increasingly competitive workforce (Ellinger

et al., 2002). The current study holds significance for both parties. For organizations, who have dedicated a vast amount of resources towards providing professional development opportunities to employees (Antonacopoulou, 2000; Van Velsor et al., 2004), the current study offers the potential to inform the process of presenting and educating organizational leaders regarding the benefits of participation in self-directed professional development by offering a better understanding of how individual attitudes regarding ability inform decision making. For individual leaders, the current study offers the opportunity to explore how internal belief systems impact how they go about their work in order to glean personal insights for improving performance.

Process to Accomplish

Participants

The participants consisted of organizational leaders from a large metropolitan area in the Midwestern United States who have at least two employees as direct reports. For the purposes of this study, organizational leaders were defined as individuals who prioritize objectives for subordinates and provide guidance toward achieving the overall vision of the organization ("Organizational leadership", n.d.). As part of the convenience sampling method utilized for the study, organizational leaders across sectors (nonprofit, for-profit, education, and healthcare) were solicited to participate in the study in order to receive completed questionnaires from as many organizational leaders as possible. Any variability resulting from organization type was controlled for during the data analysis phase of the study (Salkind, 2012). This method resulted in a total sample size of 120 participants.

Measures

The researcher measured leader self-efficacy though administration of the Leader Efficacy Questionnaire (LEQ). The LEQ is based upon leader self and means efficacy theory and captures the confidence individuals have in their own capabilities to lead as well as their beliefs regarding the extent that their peers, senior leaders, resources, and other means within their environment will support their leadership (Hannah & Avolio, 2013).

The LEQ contains three subscales: Leader Action Self-Efficacy, Leader Self-Regulation Efficacy, and Leader Means Efficacy and consists of 22 items (Hannah & Avolio, 2013). When completing the scale, participants were asked to think about

themselves as leaders within their organizations and indicate their level of confidence for each item on the scale. A score of 100 represents 100% confidence, and a score of zero indicates no confidence at all. The options range from zero to 100 and increase in intervals of 10.

Participants' engagement in leader self-directed professional development activities was assessed through the self-reporting of recent participation in self-directed professional development activities and attitudes towards these activities. The measurements used to assess both self-directed professional development participation and attitudes are included in Appendix C. For the purposes of this study, self-directed professional development focuses specifically on learning experiences in which leaders take primary responsibility for the growth of their own leadership capacities. Specifically, the organizational leader decides what knowledge and skills he or she needs to gain and then determines the pathway that best facilitates development in these areas (Boyce et al., 2010).

For the self-directed professional development participation portion of the questionnaire, participants were asked to enter the number of times they participated in a list of activities related to self-directed professional development within the past year. The items included within the measure were based on examples of self-directed professional development activities included in previous studies (Hurtz & Williams, 2009; Noe & Wilk, 1993). The researcher conducted an 18-participant pilot study to confirm the reliability of the newly developed questionnaire (Salkind, 2012). During the pilot phase, the entire survey was distributed to 30 individuals. An open-response question was added to the end of the questionnaire that asked pilot participants for

general feedback regarding the clarity of the survey and to identify any questions they found to be particularly difficult. Upon collection of the pilot study data, the reliability of the self-directed professional development participation items and the self-directed professional development attitude items was confirmed using Cronbach's alpha. The information collected during the pilot phase of the study was used to revise survey items as appropriate.

Attitudes related to self-directed professional development participation were measured by asking participants to review statements that reflect various attitudes regarding self-assessment and the importance of professional development for organizational leaders. The attitude statements were taken from a 2009 research study that measured self-assessment attitudes among physician leaders (Li, Favreau, & West, 2009). The inventory consisted of six attitude statements that were developed by the 2009 research team for a peer reviewed publication. Participants were asked to review the statements and indicate the extent to which the statements described their beliefs on a scale from zero, “Not at All” to six, “Extremely”.

Finally, participants were asked to respond to questions designed to provide demographic information such as organization type, number of direct reports, number of years within current profession, education level, and gender. The following options were provided regarding organizational type: nonprofit organization, for-profit (business) organization, government, health care, and education. Participants were also asked to report the number of individuals who report to them directly. Information related to a participant’s professional experience, level of education, and gender were also collected.

Procedures

Participants for the present study were solicited through communications that were disseminated electronically and in-person to professional associations geared towards nonprofit organizations, for-profit (business) organizations, health care organizations, and educational institutions. Interested participants were asked to follow a link to a webpage designed to ascertain their eligibility to complete the survey. The requirement for participation was that the individual hold a leadership position with at least two direct reports. Participants were informed of the participation criteria prior to beginning the survey. Once identified, participants were given the option to complete the full survey, which involved completing the LEQ, answering the self-directed professional development attitude and participation questions, and providing demographic information. Participants were informed that their completion of the survey was voluntary and that they could end their participation at any time.

As an incentive to participate in the study, participants were informed that upon completion of the questionnaire, they would be entered into a drawing to win an Amazon gift card valued at $250. A link to a separate website facilitating the drawing was included at the end of the questionnaire. This was done to ensure confidentiality and to prevent identifying information from being connected to any participant's completed questionnaire.

Research Questions

1. What is the relationship between leader self-efficacy, attitudes toward self-directed professional development activities, and participation in leader self-directed professional development activities?

2. To what extent is the relationship between leader self-efficacy, attitudes toward self-directed professional development activities, and participation in leader self-directed professional development activities moderated by gender?
3. To what extent is the relationship between leader self-efficacy, attitudes toward self-directed professional development activities, and participation in leader self-directed professional development activities moderated by professional experience?
4. To what extent is the relationship between leader self-efficacy, attitudes toward self-directed professional development activities, and participation in leader self-directed professional development activities moderated by education level?

Data Used

Leader self-efficacy was assessed through the participants' responses to the LEQ. Engagement in self-directed professional development was assessed via the participation inventory developed by the researcher and the attitude assessment adapted from Li et al., (2009). Organization type, as well as professional experience, education level, and gender were assessed via demographic questions. Each participant was assessed a LEQ composite score, a participation composite score, and an attitude composite score as well as a numerical indicator reflecting gender, education level, and professional experience.

Analysis

The data that was collected was analyzed via a regression analysis to predict leader self-efficacy based upon participation in self-directed professional development activities and participant attitudes regarding self-directed professional development. Similarly, the moderating variables of gender, professional experience, and education level were analyzed via a regression analysis to determine the extent to which each

variable moderated the relationship between leader self-efficacy, participation in self-directed professional development, and attitudes towards self-directed professional development. Within the context of the current study, the term *predict* referred to a *statistical prediction* and not an attempt to establish causality.

Summary

Through the exploration of factors related to self-directed professional development participation that fall outside of the familiar constructs of context and personality, the present research study sought to contribute to the current knowledge base related to leader self-directed professional development by expanding on the existing literature. The approach to the study emphasized the examination of self-perception and other demographic characteristics that may relate to leader self-directed professional development. The relationship between self-awareness and participation in self-directed professional development activities provides new direction to the conversation regarding a topic that has substantial implications on an individual and organizational level. The next chapter will provide an in-depth overview of the current literature related to self-efficacy and self-directed professional development and their impact within an organizational setting.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

It was not until the 19th century that the notion of leadership, and those who demonstrated it, began to be seriously considered by historians. Focusing mainly on political and military contexts, it was through contemplation of the exploits of historical heroes that the first leadership theory was developed (Cutler, 2014). Historian Thomas Carlyle proposed the Great Man theory of leadership which posits that a great man naturally possesses the essential skills that will allow him to act as a leader (Carlyle & Sorensen, 2013). Carlyle's Great Man theory is based upon the assumption that in times of need, leaders would almost mystically rise to the challenge of controlling events and leading followers to success. The belief that great leaders are born serves as the foundation for the Trait Theory of leadership (Colbert, Judge, Choi, & Wang, 2012). The Trait Theory serves as a means of categorizing the qualities that are displayed by successful leaders with the assumption that individuals with these qualities can be identified and placed in positions of authority (Borgatta, Bales, & Couch, 1954). While leadership continued to be viewed as a personal quality, a new trend emerged after World War II when Stogdill (1950) defined leadership as "the process of influencing the activities of an organized group in its efforts toward goal setting and goal achievement" (p. 4). These efforts were among the first to view leadership as more than just an

individual trait, but as a process by which an individual can influence others to meet objectives (Raelin, 2015).

Since that time, the scholarly literature surrounding leadership has continued to grow. Expanding beyond the original theories focused primarily on personal traits, the discipline has grown to include various other situational and behavioral theories and approaches that can be adapted by organizational leaders in their efforts to effectively utilize their position and influence in order to achieve organizational goals (Northouse, 2001). The current study concentrates on two major areas: the organizational setting in which leaders operate and how the self-perception of organizational leaders related to their individual behavior within that setting. In order to establish a scholarly foundation for the work to come, Chapter II will explore the extension of leadership theory into the organizational setting through a review of Functional Leadership Theory and the construct of organizational leadership leading to a discussion of how the theory of human capital applies to organizational mandates for participation in self-directed professional development. Finally, self-perception and its impact individual behavior will be discussed along with the current instruments available within the literature to measure these constructs.

Functional Leadership Theory, Organizational Leadership, and Human Capital Theory

The method by which organizations achieve the goals and objectives which constitute success can best be described by Functional Leadership Theory (McGrath, 1962). Functional Leadership Theory addresses the specific behaviors that are expected to contribute to organizational effectiveness by asserting that the leadership role is “to do, or get done, whatever is not being adequately handled for group needs” (p. 5). The

functional theory of leadership places greater emphasis on how an organization or task is being led rather than who has been formally assigned a leadership role (Hackman & Walton, 1986; McGrath). The current literature identifies several broad functions a leader provides when promoting unit effectiveness. These functions include environmental monitoring, organizing subordinate activities, teaching and coaching subordinates, motivating others, and intervening actively in the group's work (Hackman & Walton 1986; Hackman & Wageman, 2005; Klein, Zeigert, Knight, and Xiao, 2006; Kozlowski, Gully, McHugh, Salas, & Cannon-Bowers, 1996; Morgeson, 2005; Zaccaro, Rittman, & Marks, 2001). While Functional Leadership Theory has most often been applied to team leadership, it has also been effectively applied to broader organizational leadership (Zaccaro et al.). Within the context of the current study, Functional Leadership Theory serves as one explanation of the increasing organizational mandate for leaders to improve their skills (Orvis & Ratwani, 2010). Increasingly competitive organizational environments require leaders to engage in continuous improvement initiatives in order to perform their *function* and thus remain useful to the organization (Ellinger et al., 2002).

Organizational leadership involves processes that contribute to the development and achievement of organizational purpose and it is bound by the characteristic and dynamics of systems resulting in leadership destinations being caused by contextual factors. (Zaccaro, & Klimoski, 2001). Overall, leadership processes are directed at defining, establishing, identifying, or translating this direction for their followers and facilitating or enabling the organizational processes that should result in the achievement of this purpose (Klein et al, 2006). Organizational purpose and direction become defined in many ways, including through mission, vision, strategy, goals, plans, and tasks. The

operation of leadership is inextricably tied to the continual development and attainment of these organizational goal states (Zaccaro & Klimoski).

The attainment of organizational goal states cannot be accomplished without organizational members who are equipped with the skills necessary to facilitate such accomplishments. The development and maintenance of these competencies can best be explained through Human Capital Theory (Becker, 1962). Theory of human capital can be defined as skills acquisition, which can be achieved through education and training. Human capital arises out of any activity able to raise individual worker productivity (Becker). According to Human Capital Theory, education level is positively correlated with income. It specifies a particular mechanism by which education increases skills; in turn, the acquired skills increase productivity, resulting in higher productivity's being rewarded through higher earnings (Becker, 1993).

Expanding on this theory, Becker (1993) identified three types of training or knowledge that are directly related to the rate of return of human capital: on-the-job training, attendance at an institution specializing in the production of training, and any other information that a person obtains to increase his or her command of his or her economic situation (Becker). The concept of knowledge productivity describes a process that entails signaling, identifying, gathering, absorbing, and interpreting relevant information, using this information to develop new capabilities and to apply these capabilities to incremental improvement and radical innovation of operating procedures, products, and services (Kessels, 1995, 2001). The costs of learning the job are a very important component of net advantage and have led economists to claim that, other things being equal, personal incomes vary according to the amount of investment in human

capital—that is, the education and training undertaken by individuals or groups of workers ("Human capital theory", 2014). While training and educational requirements vary from institution to institution, every organization has its own value scale for assessing employee capability (Collin, van der Heijden, & Lewis, 2012). For the purposes of the current study, the concept of human capital is presented as an additional motivator behind engagement in self-directed professional development (Bezuijen, van Dam, van den Berg, & Thierry, 2010).

Professional Development

The principles behind Human Capital Theory are operationalized as professional development activities (Oro, Naue, Stürmer & Brito, 2010). Effective participation in a contemporary, technology-based knowledge society implies the increasing importance of voluntary learning and development by employees (Evers, Kreijns, van der Heijden & Gerrichhauzen, 2011; Maurer, 2002). Professional development is the means by which people maintain the knowledge and skills related to their professional lives (Collin et al., 2012). It can manifest itself in various forms, from formal educational courses to learning through everyday work practices, but in its most easily recognized form, it is the updating of professional knowledge by means of short formal courses offered by occupational groups (Collin et al.). In some cases, the practice of professional development may be regulated by national or even international law or may be delegated to the professional body, a system that has become known as self-regulation (Collin et al.). Professional development practices and tools are various and include formal training courses, coaching, and mentoring (Collin et al.).

Professional development practices may be directed, for example, by an employer, a professional body, or the individual. Examples of the latter might be the reading of professional journals to keep up to date with technical developments and the selection of and participation in short courses that meet the training needs that the professional himself or herself has identified (Collin et al, 2012). Increasingly, it is expected that professionals will reflect on their own practice and try to achieve continual improvement. In some situations, human resource management policies may be in place that encourage professional development—peer observation of practice and developmental appraisal schemes, for example. Feedback from customers, clients, patients or students may also inform professional practice and professional development (Collin et al.).

Employee engagement in learning activities is becoming increasingly important for organizational effectiveness and for employee success in today's rapidly changing workplace (Bezuijen et al., 2010). Engagement in learning activities refers to employees' discretionary behaviors in ongoing learning activities to master new knowledge, skills, and abilities (Bezuijen et al.). These activities can take different forms such as training assignments on and off the job, challenging and novel tasks, special projects, and job transitions (McCauley & Hezlett, 2001). Employee learning is generally considered an essential prerequisite for organizational adaptability and competitiveness (Maurer, Pierce, & Shore, 2002). Despite the importance of employee learning, little is known about how leaders encourage employees to engage in learning activities, and researchers have not delineated the specific behaviors and mechanisms through which such learning occurs (Vera & Crossan, 2004).

Employee engagement in learning activities has become an increasingly urgent topic in recent years (Bezuijen et al., 2010). Demands made on employees to upgrade their job skills and knowledge are increasing continually as organizations face markets that are global, competitive, and technologically-based (Maurer & Tarulli, 1994). Thus, employees who actively engage in learning activities are one of the most important sources of competitive advantage for organizations (Senge, 2006; Vera & Crossan, 2004).

Like organizations, leaders and employees benefit individually from employee engagement in learning activities. Leaders benefit when they encourage employees to undertake tasks that lead to learning, because doing so helps attain strategic team goals (Jansen, Vera, & Crossan, 2009). Moreover, employee learning is associated with improved job performance (Arthur, Bennett, Edens, & Bell, 2003), and the acquisition of new skills that serve as antecedents of job performance (Aguinis & Kraiger, 2009). Additionally, ongoing professional development through learning activities such as formal courses or professional workshops is crucial for employees, because they need to stay current in a labor market that no longer guarantees long-term employment and job security (Arthur & Rousseau, 1996). Moreover, continuous learning is an important part of many jobs, because job requirements are undergoing constant change (Sonnentag, Kuttler, & Fritz, 2010). In addition to being a necessity, engagement in learning activities can be challenging and fun, and research has associated employee learning with positive work attitudes such as job satisfaction, organizational commitment, and retention (Mikkelsen, Saksvik, Eriksen, & Ursin, 1999).

There are many different ways for employees to engage in learning activities. Whereas organizations once focused on formal training programs, they now recognize

that valuable learning takes place within daily work situations (Poell, van Dam, & van den Berg, 2004). Employee learning is believed to occur through assignments that go beyond usual job responsibilities, such as new and challenging tasks, job transitions, task force assignments, temporary attachments to other work units, and project work (Birdi et al., 1997; Maurer et al., 2002). Instead of being seen as an occasional training need, employee learning is viewed as a continuous process that may also focus on future assignments and career development (McCauley & Hezlett, 2001; Noe, Wilk, Mullen, & Wanek, 1997). Based upon a review of the existing literature, an inference can be made that career success is becoming increasingly linked to taking responsibility for one's professional development while participation in such activities has been linked to individuals with strong career aspirations (Arthur & Rousseau, 1996; Hall & Mirvis, 1995; Maurer et al., 2003).

Self-Directed Professional Development

The ability to adapt quickly is critical to the success and survival of modern organizations (Reichard & Johnson, 2011). Today's organizations experience change at a rapid pace, which forces them to emphasize the development and maintenance of their human resources (Manz & Manz, 1991). The organizational environment has become increasingly volatile, uncertain, complex, and ambiguous (Stiehm & Townsend, 2002), a state of affairs that places ever-growing demands on the skills of employees—an unfortunate consequence of the pace of industry growth in a growing gap between workplace demands and employee skill (Maurer & Tarulli, 1994). The leaders of organizations have borne the brunt of the tension between performance expectations and professional skill. As a result, organizational leaders have been faced with the challenge

of identifying ways to immediately expand human capital (Ellinger, 2004). The time-sensitive demands for rising employee skills have caused organizations and their leaders to seek alternative means for enhancing the knowledge, skills, and abilities required to succeed in a dynamic environment (Van Velsor et al., 2004). One such alternative means that has emerged is the practice whereby organizations place greater personal responsibility for professional development on their leaders (Van Velsor et al.). More and more employees are being required to be proactive in seeking out opportunities for professional development (Major, Turner, & Fletcher, 2006).

The terms *self-development* and *development* are used in many different ways within the scholarly literature as well as within organizational settings. Within the context of this study, the term *self-directed professional development* will be used as a global descriptor of the total of all deliberate activities, not formally required by the organization, that employees undertake to gain and retain job knowledge and skills (Tough, 1978). Self-directed professional development can include activities as simple as reading articles and magazines or attending a conference but extend also to the more difficult undertaking of completing a certification course. It is important to emphasize the voluntary nature of self-directed professional development activities as the distinguishing factor between other learning activities (Orvis & Leffler, 2011). Self-directed professional development activities involve participation by employees in learning experiences that are not mandated or required by the organization. This can be distinguished from required training for entry into a job or mandated retraining implemented by an organization (London, 1989). Within the context of self-directed professional development, the learner takes responsibility for his or her own training in a

particular area. The learner also establishes the conditions under which the learning takes place, as well as the context and pace of the learning (Manz & Manz, 1991; Noe, 1999; Piskurich, 1993). Such activities require the individual to take the initiative in diagnosing his or her learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes (Ellinger, 2004; Knowles, 1975).

The difference between self-directed learning and self-directed professional development is that development reflects a process: It does not end with the gaining of skills. Self-directed professional development results in the individual's not only gaining skills but also acquiring a deeper understanding of his or her operating environment and himself or herself as a leader (Day & Lance, 2004). Examples include the seeking out of mentors to explore complex work issues and frameworks (Lewis & Jacobs, 1992) or engagement in work assignments that will stretch or challenge the individual's current leadership perspectives (Ohlott, 2004). In self-directed professional development, the result is not always specific skill acquisition but rather is a more complex understanding of leadership (Lord & Hall, 2005). For leaders, such activities take on even more meaning. Leader self-directed professional development is a process in which leaders take personal responsibility for initiating, sustaining, and evaluating growth in their own leadership capacities and in their conceptual frameworks for the conduct of leadership (Boyce et al., 2010). Leader self-directed professional development focuses specifically on the self-development of leadership capacities (Reichard & Johnson, 2011). In these cases, learning is centered on the leader, who directs and is responsible for the what, where, why, and how of learning (Murphy & Young, 1995). These concepts reflect a

focus on the leader's needs, with the leader becoming an active participant in the learning process and determining which needs are most important (Reichard & Johnson).

In all, the results of previous research indicate that individual likelihood to engage in employee development is determined by several factors including prior participation in development activities, whether the individual perceives himself or herself as possessing qualities needed for learning, having social support for development at work and outside of work, and, finally, whether there is a belief in the need for development, and in his or her likelihood of receiving intrinsic benefits through participation (Maurer et al., 2003). In a 2010 study that examined the propensity to engage in leadership self-development and the relationships between self-development propensity and reported self-development activities, Boyce et al, surveyed over 400 junior military leaders and identified mastery orientation (defined within the study as self-efficacy, conscientiousness, openness to experience, learning goal orientation, intellectual maturity, and meta-cognition)work, career growth, and work orientation (defined within the study as career motivation, job involvement, and organizational commitment) as being related to self-development. Individuals who engage in self-directed professional development are able to identify, assess, and select appropriate learning resources and are able to evaluate their own learning capabilities realistically (Candy, 1991).

Although the current organizational environment demands active engagement in self-directed professional development for leaders in particular, few studies have focused on this avenue of development (Boyce et al., 2010). The research that has been conducted has focused on the individual characteristics that indicate that a person is likely to be motivated to develop his or her leadership capacities or propensity to participate in self-

directed professional development. Additionally, there has been limited research into the characteristics of individuals who actually follow through and initiate self-directed professional development activities designed to enhance their leadership skills (Boyce et al.). Although existing research has identified the constructs that are relevant to employee development, such as conscientiousness, intelligence, perceived organizational and supervisor support, and organizational commitment (Boyce, Ryan, Imus, & Moreson, 2007; Cortina et al., 2004), very few studies have explicitly examined the relationship between these constructs and participation in self-directed professional development (Maurer & Tarulli, 1994). The variables associated with employee involvement in learning and development activities related to work have gone largely unstudied (Maurer et al., 2003; Simmering, Noe, Colquitt, & Porter, 2003).

A key aspect of engagement in self-directed professional development is self-awareness reinforced by reflection and experimentation (Elena, 2000). For self-directed professional development to be effective, the individual involved must begin the process with an accurate and realistic evaluation of his or her strengths and weaknesses (Cortina et al., 2004). Self-directed professional development is driven by individuals who recognize the need to develop themselves and self-regulate their behavior accordingly. For an individual to improve his or her competence through self-directed professional development, he or she must first be interested in, and motivated to participate in, such activities (Maurer & Tarulli, 1994).

Self-Directed Professional Development Participation and Attitudes

Noe and Wilk (1993) found that motivation to learn was the only attitudinal variable that had a consistent, significant, positive influence on different outcomes related

to development activity. Additionally, they found that ensuring employees' receipt of realistic choices for development activities played a significant role in participation (Noe & Wilk). Employees' perceptions of the work environment, including social support from managers and peers for development activity and perceptions regarding working conditions, has also been found to influence development activity (Kozlowski & Farr, 1988; Noe & Wilk). Employees who have insufficient resources with which to successfully complete work assignments (e.g., lack of time to meet deadlines, inadequate budget support, poor equipment) experience frustration, become dissatisfied with their job, and likely devote most of their time, attention, and energy to trying to complete daily work assignments (Peters & O'Connor, 1980; Peters, O'Connor, & Rudolf, 1980). The more that employees perceive situational constraints as existing in their work environment, the less positive their attitudes might well be toward learning, the less beneficial they might view development activities as being, and the more likely they might be to have an incomplete understanding of their own development needs. These unfavorable attitudes and perceptions would degrade levels of development activity (Noe & Wilk).

Hurtz and Williams (2009) found that the largest effect on participation rates revealed in this study was simply the recognized availability of the activities. Additionally, employees who felt that employee development would be enjoyable and worthwhile, leading to desired outcomes, were almost certain to indicate that they would participate in future activities (Hurtz & Williams). Reactions to past participation can significantly affect attitudes toward future activities. Shoddily selected and executed development activities having no clear relation to outcomes that are valued by the

employees will likely result in negative evaluations and more negative attitudes about and intentions toward future participation in those activities (Hurtz & Williams). Consistent with the findings of Noe and Wilk (1993), perceived supportiveness of the social and organizational environment also tends to heighten an employee's conviction that important people desire his or her participation, which in turn affects that employee's own attitude toward participating (Hurtz & Williams). A review of recent studies focusing on self-directed professional development reflects a focus on measuring development activities that occur during working hours in combination with other environmental factors (such as availability or participation incentive) or personality traits (such as learning goal orientation or motivation to lead (Hurtz & Williams; Maurer et al., 2003; Orvis & Leffler, 2011). Additional research has measured self-directed professional development participation as part of research on attitudes of trainees (Noe, 1986), influences on continuing education (Garofano & Salas, 2005), and desire to develop leadership skills (Boyce et al., 2010).

Any scholarly investigation into leadership must include how the individual views himself or herself before it can attempt to understand other motivating factors. In today's turbulent economic climate, which is characterized by intense pressures to improve productivity and reduce costs, organizational leaders have been forced to take on a central role in helping to ensure competitive advantage (Hall & Rowland, 2016). In such circumstances, organizations must be agile, able to quickly do different things in different ways while responding to change, implying an ability to learn (Horney, Pasmore, & O'Shea, 2010). Accordingly, research into the environment in which modern organizations now function has reinforced the importance of understanding the forces

that lie behind the development decisions made by organizational leaders—forces that extend far beyond the well-established external antecedents of time and resources.

Self-Efficacy

The complex and dynamic organizations that make up today's working environment create broad and far-reaching challenges for the individuals whom they employ (Marion & Uhl-Bien, 2001). To meet these demands, organizational leaders must not only possess knowledge, skills, and abilities related to their current positions but also maintain the psychological resources needed to operate successfully (Hannah, Woolfolk, & Lord, 2009; Lord & Hall, 2005). One of these key psychological resources is self-efficacy, which has been shown to aid individuals during times of change and stress (Fredrickson, 2001). Perceived self-efficacy, the primary focus of social cognitive theory (Bandura, 1986), is defined as "beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" (Bandura, 1997a, p. 3). Bandura's Social Cognitive Theory asserts that human beings are able to exercise self-motivation and control in order to monitor their behavior. Beliefs surrounding self-efficacy influence this exercise by impacting how individuals reason, experience emotions, and incentivize themselves (Bandura, 1977a). Thus, self-efficacy is considered to be a primary antecedent of behavior at the individual level.

Within the context of leadership, the current literature has identified the self-efficacy of leaders as a precursor for the motivation to lead, for leadership behaviors, for the leading of change, and for leadership effectiveness (Chan & Drasgow, 2001; Chemers, Watson, & May, 2000; Hannah & Luthans, 2008; Harms, Spain, & Hannah, 2011; Hendricks & Payne, 2007; Hoyt, 2005; Kane, Zaccaro, Tremble, & Masuda, 2002;

Lester, Hannah, Harms, Vogelgesang, & Avolio, 2011; Murphy, 1992; Ng, Ang, & Chan, 2008; Paglis & Green, 2002; Van Iddekinge, Ferris, & Heffner, 2009). Although various lines of research have explored and documented the cognitive factors that have motivational effects on human action (George, 1992; Weiss & Adler, 1984), very few have received empirical support as ample and consistent as that afforded the concept of self-efficacy (Bandura, 1986, 1997b; Maddux, 1995).

Efficacy Perceptions

The concept of self-appraisal is important in studies of leadership because leaders often hold strong beliefs about which actions, performance responsibilities, and capabilities are necessary for successful leadership (Murphy, 2002). Leaders' perceptions of their own leadership abilities often become the basis for how they evaluate themselves. This evaluation can affect a leader's participation in development activities (Murphy). Unfortunately, leaders' self-appraisals, particularly in relation to self-directed professional development, can be influenced by individual perception biases. A common bias held by leaders is the tendency to inflate one's strengths while minimizing weaknesses and attributing failure to situational events (Greenwald, 1980, 1988; Taylor & Brown, 1988).

The benefits of positive self-efficacy can be found throughout the literature. A recent study regarding health-related quality of life found a positive relationship with the self-efficacy perceptions of participants and their health-related quality of life, describing implications of considering self-efficacy and optimism to be targets for psychological interventions (Popa-Velea, 2016). This also extends to literature in the area of addiction and substance abuse. Self-efficacy perceptions have been found to mediate the effects of

treatment on drinking outcomes more than readiness to change, perceived risks, norm estimates, and positive drinking expectancies (LaChance, Ewing, Bryan, & Hutchison, 2009). This study utilized the Drinking Refusal Self-Efficacy Questionnaire, a 31-item, Likert scale measure that assesses individuals' confidence to resist drinking in three types of situations (Young, Oei, & Crook, 1991). Related to health care, Dong, Fabian, and Xu (2016) found a positive relationship between self-efficacy levels and intention to request Americans with Disabilities Act accommodations. The findings suggested that participants who possess a higher level of confidence in performing accommodation-related tasks and goal-achieving related activities are more likely to request workplace accommodations (Dong et al.). Further examples have been found in the financial sector, including positive and highly significant relationships between self-efficacy and an increase in wealth over time even when income earned during this period was accounted for. Self-efficacy was found to be associated with a higher likelihood of financial asset ownership even after controlling for wealth, risk tolerance, education, and income (Chatterjee, Finke, & Harness, 2011).

Misjudgments related to personal efficacy can have adverse individual and organizational consequences, for they influence choice of activities (Tsai, Tsai, & Wang, 2011). Judgments of self-efficacy also determine how much effort an individual will expend, and how long he or she will persist, in the face of obstacles or adverse experiences. When faced with difficulties, individuals who entertain serious doubts about their capabilities may slacken their efforts or give up altogether. Alternatively, those who have a strong sense of efficacy exert greater effort to master challenges (Bandura, 1982). Proper assessment of self-efficacy can mean the difference between individual and

organizational success and failure. Overestimation, by contrast, could lead to organizational problems, setbacks, and loss of confidence for individuals, whereas underestimation could limit development and diminish the opportunities of potential leaders (Tsai et al.).

Efficacy Versus Confidence

Self-confidence is viewed almost universally as an essential characteristic for effective leadership (Bass, 1990; House & Aditya, 1997; Yukl & Van Fleet, 1992). An important concept in personality psychology, self-confidence refers to an individual's judgment about his or her own capabilities and skill or his or her perceived competence to deal successfully with the demands of a variety of situations (Shrauger & Schohn, 1995). However, it is important to note that despite being used colloquially to express many of the concepts defined under self-efficacy, self-confidence is not a construct embedded in a validated theoretical system specifying its determinants, processes, and effects (McCormick, 2001). Thus, colloquial use notwithstanding, self-confidence and self-efficacy are not identical concepts. Self-confidence is a personal trait that reflects a generalized sense of competence and is rarely subject to change due to circumstance (McCormick et al., 2002).

Self-efficacy is a personal belief, a self-judgment about one's task-specific capabilities, and is subject to change under certain conditions (McCormick et al., 2002). A leading self-efficacy theorist has written specifically about the difference between self-efficacy and self-confidence, saying that "confidence is a nondescript term that refers to strength of belief, but does not necessarily specify what the certainty is about" (Bandura, 1997d, p. 2). Although viable as a personality trait to be studied within appropriate

contexts—that is, studies focusing on personal agency—the trait of self-confidence should be viewed as affecting leadership performance through the mediating mechanism of leadership self-efficacy: a person's confidence in his or her ability to successfully lead (McCormick, 2001).

Impact of Efficacy Judgements

As discussed earlier, perceived self-efficacy is the extent to which individuals perceive themselves as capable of successfully meeting existing challenges (Bandura, 1977a, 1977b, 1982, 1986) and affects the amount of effort a person expends in seeking to do so, as well as how long he or she persists in the face of challenge and adversity (Bandura, 1977a, 1977b, 1982, 1986). These self-enhancing biases regarding capability can drastically interfere with the formation of the self-appraisals that are necessary to effectively engage in self-directed professional development by preventing leaders from accurately assessing their developmental needs (Cortina et al., 2004). Individuals who fall prey to such biases are more likely to view negative self-qualities as negligible, labeling their areas of weakness as things that many or most individuals struggle with while framing their strengths as distinctive. They are also more likely to view tasks that they are not strong at as unimportant (Fiske & Taylor, 1991). Successful engagement in self-directed professional development can be brought about only by accurate self-assessment. However, accurate self-assessment can be compromised by perceptual biases, preventing those in the most need of these activities from participating in them (Cortina et al.).

Self-efficacy is considered to be the result of a relationship between cognitive, environmental, and behavioral factors (Bandura, 2001). The cognitive aspect consists of

personal goals, self-evaluation of performance, and the quality of analytical thinking (Bandura). The environmental component comprises the level of challenge and the circumstances under which the act takes place (Bandura). Finally, the behavioral aspect consists of the choices executed (Bandura).

The results of prior research have found that the stronger the level of perceived self-efficacy, the higher the challenge individuals set for themselves and the better an individual's ability to cope with obstacles (Moores & Chang, 2009). In fact, by raising one's self-efficacy, the amount of effort and time one is willing to devote to the task also increases, leading to higher performance (Moores & Chang).

However, increasing evidence suggests that one can become overconfident when a person's belief about his or her expected level of performance exceeds his or her actual performance (Moores & Chang, 2009). This research suggest that self-efficacy is composed only of satisfaction in one's own level of performance, with high levels in this area potentially resulting in complacency, leading to a negative relationship between self-efficacy and performance over time (Vancouver, 2005).

Bandura & Jourden's (1991) concept of *complacent self-assurance* reflects a similar phenomenon. Indeed, Bandura and Jourden (1991) observed that students playing a management simulation game retained a high level of self-efficacy in the face of declining performance. To optimize performance of the organization that the subjects were managing, the participants were asked to match employee attributes to specific subfunctions and to learn a complex set of decision rules for how best to guide and motivate their supervisees. To discover the rules, they had to test options, cognitively process the outcome feedback information of their decisional actions, and continue to

apply analytic strategies in ways that would reveal the governing rules. The subjects were informed that they would receive feedback on how well their group had performed at the end of each production order. They could use this information to adjust their decisions so as to improve their group's level of performance (Bandura & Jourden). Those who excelled at the simulation set lower goal challenges for themselves and were highly self-satisfied with declining performance attainments because they happened to surpass the performances of their comparators, suggesting that complacent self-assurance creates little incentive to expend the increased effort needed to attain high levels of performance (Bandura & Jourden).

Despite the growing evidence, the problem of overconfidence was dismissed as being of no consequence (Moores & Chang, 2009). It should be noted that judgment of self-efficacy is made under conditions of uncertainty, because it is typically measured before a task is performed (Moores & Chang). Moores and Chang found, "first impression judgment of self-efficacy is particularly important because it affects the activities that a person decides to pursue, the effort devoted to the activity, and subsequent self-efficacy judgment" (p. 69). Furthermore, tendencies toward overly positive self-evaluation cause individuals to seek confirming rather than non-proving evidence, thus overestimating their ability to perform a task (Moores & Chang).

Other studies have also found that positive information about expected performance (also referred to as high performance anchors) increased self-efficacy but not performance. Mildly negative performance anchors have been found to lead to increased effort, keener attention to strategy, and heightened performance by increasing the challenge of the task, although the effect of positive and negative feedback appeared

to be significant only when the task was complex (Vancouver & Tischner, 2004). This particular finding suggests that to promote performance in complex tasks, self-efficacy must be held in check (Moores & Chang), and it holds possible implications for the role that self-efficacy plays in leadership, which is a task of extreme complexity.

High self-efficacy may lead to a premature belief that the goal state has been reached, leading to decreased effort and performance (Moores & Chang, 2009). In a 2009 study of undergraduate management information system students, Moores and Chang found that performance was found to be positively and significantly related to subsequent self-efficacy, whereas self-efficacy was negatively related to subsequent performance, although not significantly. Specifically, they found that for each point increase in self-efficacy, performance decreased (Moores & Chang). This led the researchers to conclude that overconfidence, measured in terms of overestimating one's initial performance, promotes an unwavering belief in one's ability (Moores & Chang). Furthermore, being underconfident reduced self-efficacy but increased performance (Moores & Chang).

Similar findings have also been obtained in studies related to athletic performance. Gilson, Cisco Reyes, and Curnock (2012) found that self-efficacy was positively related to effort in strength training sessions at both within- and between-person levels of analysis (Gilson et al.). Positing that self-efficacy is a variable that fluctuates in accordance with changing perceptions, the researchers stated that "even though perceptions may change, the skill set of an athlete is not in a constant state of flux during a skill; therefore, self-efficacy is not concerned with the number of skills one possesses but with what an athlete believes he or she can accomplish with those skills" (Gilson et al., p. 443). Gould, Petlichkoff, Simons, and Vevera (1987) identified a

negative relationship between self-confidence and shooting performance—and Hardy, Woodman, and Carrington (2004) found that high self-confidence was associated with depressed golf performance scores. One explanation for such findings is that high confidence can lead to risk-taking or complacency, either of which may hinder performance (Campbell, Goodie, & Foster, 2004; Jones, Swain, & Hardy, 1993). While the athletic arena may vary widely from the business and management sectors, complacency and excessive risk taking are also problematic for organizational leaders (Reichard & Johnson, 2011)

These and other such studies highlight the possibility that individuals too high in self-efficacy may suffer debilitating performances over time, whereas individuals who may unsuccessfully complete a task or not meet their performance expectations based on their current self-efficacy will improve their subsequent performance (Vancouver & Kendall, 2006; Vancouver, Thompson, Tischner, & Putka, 2002; Vancouver, Thompson, & Williams, 2001; Yeo & Neal, 2006). These research findings further strengthen the argument that the strong relationship between self-efficacy and performance occurs because of the influence of a performance on self-efficacy rather than the influence of self-efficacy on a performance (Gilson et al., 2012).

The support for the positive relationship between self-confidence (efficacy) and performance is strong both theoretically and empirically (Bandura, 1997d; Bandura & Locke, 2003; Martens, Vealey, & Burton, 1990; Vealey, 1986, 2001; Woodman & Hardy, 2003). However, there is emerging research to suggest cause for concern about high levels of self-efficacy while providing an alternative perspective to the readily

accepted view that self-confidence is linearly beneficial to performance (Woodman, Akehurst, Hardy, & Beattie, 2010).

Vancouver et al. (2001) found over time that high self-efficacy led participants to commit too early to a problem-solving response, which ultimately led them to provide incorrect responses. A study on the possible negative effects of self-efficacy on college student exam study time and performance found that over the course of four examinations, as self-efficacy increased by a letter grade, study time decreased by 15 minutes and exam performance decreased by nearly a quarter letter grade (Vancouver & Kendall, 2006). The researchers postulated that when individuals perceive themselves to be close to attaining their goal, their confidence may induce a degree of complacency about the task at hand. This position was also supported by Bandura and Locke (2003) who stated that "some self-doubt about one's performance efficacy provides incentives to acquire the knowledge and skills needed to master the challenges" (p. 96). An element of self-doubt may signal that an increase in effort is required, which can lead to an improvement in performance (Eysenck & Calvo, 1992). Such findings add to a growing body of research evidence that suggests that performance improves when self-confidence decreases (Gould et al., 1987; Hardy et al., 2004; Vancouver, More, & Yoder, 2008; Vancouver et al., 2001; Vancouver et al., 2002; Woodman et al., 2010).

Leader Self-Efficacy: Definitions and Measures

Organizational leaders face challenges that test their knowledge, skills, and abilities as well as their self-conceptualizations of their leadership capabilities (Avolio & Luthans, 2006; Hooijberg, Hunt, & Dodge, 1997; Lord & Hall, 2005). These self-conceptualizations are often reflected in the individual's level of leader self-efficacy, a

specific form of efficacy associated with one's level of confidence in the knowledge, skills, and abilities associated with leading others (Hannah et al., 2008). Prior research has identified strong positive relationships between self-efficacy and human performance within organizations (Holden, 1991; Multon, Brown, & Lent, 1991; Stajkovic & Luthans, 1998). Leader self-efficacy specifically has been linked to outcomes such as ratings of leader potential and motivation to lead (Chan & Drasgow, 2001), organizational commitment (Paglis & Green, 2002), simulated organizational performance (Wood & Bandura, 1989), and perceived leader performance (Chemers et al., 2000). Leader self-efficacy has also been associated with positions that have higher levels of encouragement from current leaders (Mellor et al., 2006) as well as higher levels of job autonomy, resource supply, and organizational support for change (Paglis & Green, 2002). High levels of self-efficacy provide the internal guidance and drive needed to produce the agency required for successful pursuit of challenging tasks and opportunities (Carver & Scheier, 1998; Cropanzano, James, & Citera, 1993; Lord & Brown, 2004; Mischel & Shoda, 1998; Shamir, House, & Arthur, 1993).

As has been suggested, leadership is inherently a social phenomenon requiring recognition of the leader's context (Osborn, Hunt, & Jauch, 2002; Porter & McLaughlin, 2006). It does not occur within a vacuum. Leader self-efficacy is only part of the equation that calculates an organizational leader's sense of personal agency. The concept of leader self and means efficacy refers to a leader's level of perceived capability to self-regulate his or her thoughts and motivation, draw from means in his or her environment, and act successfully across a span of leader challenges and tasks within his or her current context (Hannah, Avolio, Walumbwa & Chan, 2012).

Leader action self-efficacy refers to a leader's perceived ability to effectively execute various critical leader actions such as motivating, coaching, and inspiring followers, inducing them to identify with the organization and its goals and vision (Hannah & Avolio, 2013). This includes leaders' beliefs that they can direct, inspire, coach, administer rewards, and otherwise gain follower commitment and enhance follower performance (Hannah et al., 2012).

Leader means efficacy refers to a leader's perception that he or she can draw on others within the work environment (peers, senior leaders, followers) to enhance the individual leader's leadership ability and that the organization's policies and resources can be leveraged to affect their leadership (Hannah et al., 2012). Leader means efficacy goes beyond personal self-efficacy to reflect a leader's belief in the utility of the means available for performing. Such means can range from inanimate tools such as a management information system to supervisors, managers, teammates, budgets, organizational structures, and administrative support (Eden, Ganzach, Granat-Flomin & Zigman, 2010).). It is important to note that means efficacy is not merely a function of the availability of means but is also what one believes that he or she can do with those means to enhance his or her leadership performance (Eden et al., 2010).

Leader self-regulation efficacy refers to a leader's perceived capability to think through complex leadership situations, interpret his or her followers and the context, and generate novel and effective solutions to leadership problems while motivating himself or herself to enact those solutions using effective leadership with followers (Hannah et al., 2012). Leadership requires complex social problem solving skills. Self-efficacy to regulate thought is central to a leader's ability to generate effective solutions, having been

empirically linked to memory functioning and recall (Hultsch, Hertzog, Dixon, & Davidson, 1988), cognitive performance (Schunk & Gunn, 1986), greater application of attention and information processing resources (Berry, 1987), ability to acquire complex skills (Kanfer & Ackerman, 1989), and enhanced idea generation (Gist, 1989).

Leader self and means efficacy theory is based on the assumption that personal self-efficacy is only part of efficacy's influence on leader performance (Hannah et al., 2012). Because leadership is a social process involving others and resources, leaders' beliefs in the quality and utility of the means available to support their leadership are inextricably linked to their formation of leader self and means efficacy (Eden et al., 2010). The sense of human agency is brought on by efficacy perceptions through the interactions of the thoughts and motivations of the person involved, his or her individual actions, and the context in which he or she is operating. Each of these elements influences the others (Hannah et al., 2012). The impact of these facets of human agency can be measured through leader action self-efficacy, leader means efficacy, and leader self-regulation efficacy (Hannah et al.).

Measures of Efficacy

Perceived self-efficacy is concerned with individuals' beliefs in their ability to produce given attainments (Bandura, 1997d). Individuals differ in the areas in which they cultivate their efficacy and in the levels to which they develop it, even within their given pursuits (Bandura, 2006). Thus the efficacy belief system is not a global trait but rather is a separated set of self-beliefs linked to distinct realms of functioning (Bandura, 2006). There is no all-purpose measure of perceived self-efficacy. Generalized approaches to measuring self-efficacy have limited explanatory and predictive value, as most of the

items in such a test may have little or no relevance to the domain of functioning (Bandura, 2006). Additionally, items in such a measure are usually cast in general terms divorced from the situational demands and circumstances, resulting in ambiguity about exactly what is being measured or the level of task and situational demands that must be managed (Bandura, 2006). Scales of perceived self-efficacy must be tailored to the particular domain of functioning that is the object of interest (Bandura, 2006).

One of the ways that researchers have attempted to address the difficulties with development of valid and reliable measures of self-efficacy is by focusing instead on general self-efficacy. Researchers have suggested that general self-efficacy (GSE) can substantially contribute to organizational theory, research, and practice (Chen, Gully, & Eden, 2001).

General self-efficacy is focused more on the more trait like generality dimension of self-efficacy, which has been termed general self-efficacy (Eden, 1988,; Gardner & Pierce, 1998; Judge, Erez, & Bono, 1998; Judge, Locke, & Durham, 1997). General self-efficacy is defined as "one's belief in one's overall competence to effect requisite performances across a wide variety of achievement situations" (Eden, 2001, p. 68) or as "individuals' perception of their ability to perform across a variety of different situations" (Judge et al., 1998, p. 170). GSE reflects a generalization across various domains of functioning in which people judge how efficacious they are (Luszczynska, Scholz, & Schwarzer, 2005). However, the limited construct validity work conducted on commonly-used general self-efficacy measures has highlighted such potential problems as low content validity and multidimensionality (Chen et al., 2001). For this reason in the majority of applications, perceived self-efficacy should be conceptualized in a situation-

specific manner (Bandura, 1997d). GSE, however, may explain a broader range of human behaviors and coping outcomes when the context is less specific. Due to its focus on *given situational demands*, self-efficacy has a narrow focus, and most researchers have limited their research to studying self-efficacy as a task-specific construct (Gist & Mitchell, 1992; Lee & Bobko, 1994). This research study will follow suit by specifically examining self-efficacy as it pertains to organizational leaders.

Leader Efficacy Questionnaire

The dynamic and complex nature of organizations creates a broad range of challenges for leaders (Hannah & Avolio, 2013). In addition to having sufficient knowledge, skills, and abilities to meet these demands, leaders must also have the efficacy needed to successfully employ those capabilities across dynamic and changing contexts (Hannah & Avolio). Based on leader self and means efficacy theory, the LEQ captures leaders' self-efficacy (individuals' confidence in their own capabilities to lead) as well as leaders' beliefs in the extent to which their peers, senior leaders, resources, and other means in their environment will support their leadership (Hannah & Avolio). The fundamental assertion behind the LEQ is that personal self-efficacy is only half the leader efficacy story—leaders must also generate confidence that their context will support their performance as a leader (Hannah & Avolio). The LEQ, a relatively new instrument, is one of a few scales that solely measures leadership self-efficacy in an organizational environment (Hannah & Avolio). Its authors indicate that the LEQ has been validated across seven diverse sample groups and has been shown to predict outcomes related to leader performance, enhanced motivation to lead others, and highly effective leadership style, such as transformational leadership (Hannah & Avolio). Although it is a fairly new

instrument, the LEQ has already been used in at least three studies in which the aim was to measure leader self-efficacy with a view to understanding its relationship with another trait or pattern of behavior. These studies include a study on emotional intelligence and leader self-efficacy perceptions among correctional executives and senior-level leaders (Harper, 2016), a study that examined leadership traits useful in nonprofit board of directors' search for new leadership (Glover, 2017), and a 2015 study that examined growth leader self-efficacy over time in undergraduate student leaders (Christensen, 2015).

Conclusion

Individuals behave according to how they see themselves within a situation or system (Sincero, 2012). The present study sought to build upon this premise by exploring the potential relationship between leader self-efficacy and individual's engagement in activities designed to enhance professional proficiency. Organizations are demanding and complicated. Organizational leaders have to remain adaptive to meet these challenges. For leaders, self-directed learning regarding their profession and organizational role have been shown to be very important (Marion & Uhl-Bien, 2001). Participation in self-directed learning only occurs if the individual believes that such activities are necessary and beneficial (Day & Lance, 2004)). Research has been conducted to establish the relationship between self-efficacy and performance in many areas: the likelihood of overcoming substance abuse (LaChance et al., 2009), success within the financial sector (Chatterjee et al., 2011) and athletic performance. The premise of the present study is that the potential influence of efficacy perception on efforts to enhance professional proficiency warrants exploration. Therefore, it is necessary to explore the relationship

between individual leader perception and engagement in self-directed professional development.

Summary

Research affirms the importance of a leader's investing in his or her own development (Boyce et al., 2010; Orvis & Ratwani, 2010; Reichard & Johnson, 2011). Ongoing professional development through participation in self-directed professional development activities is an essential part of effective leadership (Birdi et al., 1997; Boyce et al.; Maurer et al., 2002; Maurer & Tarulli, 1994; Noe & Wilk, 1993; Orvis & Ratwani, 2010). This study measured leader confidence through leader self-efficacy to better understand engagement in self-directed professional development. The following chapter describes the quantitative methodology that was used in this study and outlines how this methodology was applied to the four research questions previously presented.

CHAPTER III

METHODOLOGY

Introduction

Self-perception and individual action collide within the organizational space (Elnaga, 2012). The preceding literature review outlined research-based contextual antecedents of self-efficacy, specifically as applied to organizational leaders as well as the individual and organizational value of engagement in self-directed learning. Additionally, Functional Leadership Theory (McGrath, 1962; Hackman & Walton, 1986; Kozlowski et al.,1996; Zaccaro et al., 2001) and its influence on organizational leadership was explored in order to set the stage for the quantitative methodology selected by the researcher to meet the goals of the current study. This chapter will describe the steps involved in the chosen methodology.

The current study sought to measure the relationship between leader self-efficacy and engagement in self-directed professional development. This aim was accomplished through an examination of the variables of leader self-efficacy, participation in self-directed professional development activities, and attitudes regarding self-directed professional development, as well as the potential relationships and interactions among these variables. Focusing specifically on organizational leaders, the researcher assessed leader self-efficacy and engagement in self-directed professional development through

the use of previously-validated measures and an inventory developed by the researcher to create a framework to answer the research questions below.

Research Questions

1. What is the relationship between leader self-efficacy, attitudes toward self-directed professional development activities, and participation in self-directed professional development activities?
2. To what extent is the relationship between leader self-efficacy, attitudes toward self-directed professional development activities, and participation in self-directed professional development activities moderated by gender?
3. To what extent is the relationship between leader self-efficacy, attitudes toward self-directed professional development activities, and participation in self-directed professional development activities moderated by professional experience?
4. To what extent is the relationship between leader self-efficacy, attitudes toward self-directed professional development activities, and participation in self-directed professional development activities moderated by education level?

Research Design

The purpose of this study was to explore the relationship between leader self-efficacy and engagement in self-directed professional development in order to gain a better understanding of the influence of self-perception on individual behavior within an organizational setting. The current research study focused on organizational leaders who prioritize objectives for subordinates and provide guidance toward achieving the overall vision of the organization ("Organizational leadership", n.d.). A quantitative research design was used to achieve this purpose. The intent of a quantitative research design is to

identify relationships among two or more variables of interest and then confirm or modify theories or practices based upon the results (Leedy & Ormrod, 2016). A correlational research approach was utilized to address the four research questions. Correlational research serves to provide an indication as to how two or more variables are related to each other (Salkind, 2012). In this case, a correlational approach was utilized specifically to measure how well a specific outcome may be predicted by one or more pieces of information (Leedy & Ormrod). The current study was designed in such a way to allow the researcher to explore whether engagement in self-directed professional development could predict (within the statistical sense) leader self-efficacy.

Leader self-efficacy was measured through the LEQ developed by Hannah and Avolio (2013). The LEQ has been validated across seven diverse sample groups and has been shown to predict outcomes related to leader performance, enhanced motivation to lead others, and highly effective leadership style, such as transformational leadership (Hannah & Avolio). A copy of the documentation providing permission to use the LEQ is included in Appendix A.

The LEQ contains three subscales: Leader Action Self-Efficacy, Leader Self-Regulation Efficacy, and Leader Means Efficacy (Hannah & Avolio, 2013). The LEQ consists of 22 items. As developed by Hannah and Avolio, the first seven items measure Leader Action Efficacy ("As a leader , I can energize my followers to achieve their best"), the next seven items measure Leader Means Efficacy ("As a leader , I can rely on the organization to provide the resources needed to be effective"), and the final eight items measure Leader Self-Regulation Efficacy ("As a leader , I can remain steadfast in my core beliefs when I'm challenged"). When completing the LEQ, participants were

asked to think about themselves as leaders within their organizations and indicate their level of confidence for each item on the scale. The options ranged from zero to 100 and increased in intervals of 10. A score of 100 represented 100% confidence, and a score of zero indicated no confidence at all.

The Likert scale items used to measure self-directed professional development attitudes were taken from a 2009 research study that measured self-assessment attitudes among physician leaders (Li et al., 2009). The inventory consisted of six attitude statements developed for a peer reviewed publication. Participants entered a response to each item using a Likert-scale to indicate to what extent (from zero, meaning "Not at All", to six, meaning "Extremely") each attitude statement reflected their views on self-directed professional development and leader engagement in self-directed professional development activities. Participants responded to the following statements: "Those who serve in leadership should continually seek out opportunities to enhance their skill set"; "I have a good understanding of how to assess my own skills"; "I am confident in my ability to identify my strengths"; "I am confident in my ability to identify my areas for improvement"; "I continuously assess my own performance"; and "Lifelong learning is necessary to being an organizational leader."

In order to determine internal consistency of the attitude statements, Cronbach's Alpha was assessed via SPSS (Leedy & Ormrod, 2016). The results of this analysis found the attitude inventory to be highly reliable. Permission was sought to use the scale from the author of study (see Appendix B). One of the statements was changed to reflect that this study focused on organizational leaders and not on physicians. The statement

"Lifelong learning is necessary to being an organizational leader" originally referred to physicians but was changed for the purposes of this study.

Due to the absence of an instrument to collect self-directed professional development participation without assessing the quality of the activity or attractiveness of the activity to the participant, the researcher developed an inventory to collect self-reported participation in these activities. To confirm the reliability of the newly developed questionnaire, the researcher conducted a pilot study with 18 participants (Salkind, 2012). The results of the pilot data analysis were used to modify the instrument prior to conducting the full study. Participants indicated the number of times they participated in the specified activities in the past year and in the past three months by entering a numerical value to represent their participation. The options included: attended a voluntary training course or workshop regarding emerging topics within your field; attended a voluntary training course or workshop regarding effective leadership; presented at a conference or workshop; served as an officer, board member, or committee member of an organization other than your current employer.

In order to supply data for the moderating variables included in the aforementioned research questions, information regarding gender, education level, and professional experience were collected. For gender, two options were offered: male and female. Participants were given several options for education level: less than high school, high school, trade/technical training, some college, associate degree, bachelor's degree, master's degree, professional degree (DDS, JD, MD), doctorate (PhD, EdD). For the purposes of this study, professional experience was measured via the number of years employed following completion of high school and the number of years' experience at

the participant's current job. An open text box was provided for participants to enter their answers. Additionally, information was collected regarding organization type, with the following options available: for-profit, nonprofit (religious, arts, social assistance, etc.), government, health care, education, and other. The demographic questions were developed by the researchers who developed the LEQ and were included using the exact same wording to ensure validity and reliability in the current study.

Participants

For the current study, the population consisted of organizational leaders. Organizational leaders were defined as individuals who prioritize objectives for subordinates and provide guidance toward achieving the overall vision of the organization ("Organizational leadership", n.d.). The researcher focused on individuals located within the metropolitan Chicago area. Convenience sampling was used to generate participants for the current study. Convenience sampling is a non-probability sampling technique where subjects are selected because of their convenient accessibility and proximity to the researcher (Salkind, 2012).

While convenience sampling can be problematic in terms of generalizability of the findings (Dornyei, 2007; Landers & Behrend, 2015), this method was selected due to the researcher's concern that individuals completing the survey within the setting of their employing organizations may feel pressured to respond in a way favorable to their employer, a common issue in organizational research because employment and livelihood are involved (Paulhus, 1984; Paulhus & Reid, 1991). Just as the literature has established the benefit of participation in self-directed professional development for employee performance, it also indicates that organizations are taking steps to encourage employees

to participate even to the extent of providing incentives (Ellinger et al., 2002). Due to the risk that this emphasis on professional development could cause participants to feel pressured to respond in a certain way, participants were solicited outside the organizational setting through the use of new communication channels that cater to individuals likely to meet the criteria for this study. This included the submission of an advertisement in university electronic communications at schools of business and nonprofit administration within the target area (a copy of the communication is included in Appendix D). Additionally, written communications were submitted to professional societies in the areas of finance, accounting, nonprofit administration, health care, and leadership councils. The researcher also solicited attendees at a regional educational leadership conference. Postcards explaining the study and including the link were offered to conference attendees. The researcher's contact information was included in case of questions or concerns.

The resulting sample consisted of organizational leaders who initiated the online survey. In total, 216 organizational leaders initiated the survey via the electronic link. Initial review of the responses eliminated 33 submissions (15%) in which the participant did not indicate at least two direct reports. Due to the sensitivity of the instruments used in the study, only fully complete questionnaires were included in the final sample. As a result, 63 submissions (29%) with an incomplete LEQ or attitude inventory were removed, as incomplete answers in these sections could skew the results. In total 120 completed questionnaires were submitted to the researcher electronically via the online survey administrative platform used for the study. The final sample included 64 women and 56 men from the following organization types, including 63 (53%) for-profit, 13

(11%) nonprofit, 10 (8%) government, 12 (10.0%) health care, 12 (10.0%) education, and 10 (8%) other.

Data Collection

Pilot Study

The original study design included the LEQ and two inventories developed by the researcher regarding engagement in self-directed professional development. For the self-directed professional development participation portion of the questionnaire, participants were asked to enter the number of times they participated in a list of seven activities related to self-directed professional development within the past year. The activity options included the following: working with a mentor or coach, attending a voluntary training course or workshop, spending time outside of work reading books or periodicals, enrolling in a formal degree program, pursuing a certificate or another educational credential, participating in conference presentations, and serving as an officer, board member, or committee member of an organization other than their current employer. The items included within the measure were based on examples of self-directed professional development activities included in previous studies (Hurtz & Williams, 2009; Noe & Wilk, 1993).

Attitudes related to self-directed professional development participation were measured by asking participants to review three statements regarding self-directed professional development attitudes developed by the researcher. The statement options were: “My employer provides all of the professional development opportunities that I need to be successful. There is no need to seek outside sources”; “It is the responsibility of those who serve in leadership to continually seek out opportunities to enhance their

skill set, even if it is at their own expense"; and "All of my efforts are concentrated on meeting organizational objectives; there is rarely time to explore professional development opportunities." Participants were asked to indicate the extent to which the statements described their beliefs on a scale from zero, "Not at All" to six, "Extremely". The researcher conducted a pilot study with 18 participants to confirm the reliability of the newly developed questionnaire (Salkind, 2012).

During the pilot phase, the entire survey was distributed to 30 individuals. Using purposive sampling (a nonprobability sample selected based on characteristics of a population and the objective of the study defined by Tongco, 2007), individuals were identified from the executive staff of a health education nonprofit within the target area. The researcher also utilized a social media website geared toward professionals of all fields and contacted members whose profiles indicated a focus on organization leadership. Purposive sampling was deemed appropriate due to the researcher's desire to obtain feedback on the overall structure of the survey from individuals familiar with the terminology used (Salkind). The participants in the pilot study came from a diverse group of organizations reflecting 63 (53%) for-profit, 13 (11%) nonprofit, 10 (8%) government, 12 (10.0%) health care, 12 (10.0%) education, and 10 (8%) other. An open-response question added to the end of the questionnaire asked pilot participants to provide general feedback regarding the clarity of the survey and to identify any questions they found particularly difficult.

Upon collection of the pilot study data, the reliability of the self-directed professional development participation items was analyzed through SPSS using Cronbach's alpha. The original analysis showed that the seven items, taken together,

were not reliable to an acceptable scientific standard. Through a trial-and-error process of removing different activities, the researcher identified four options that, taken together, were strongly reliable. The final four items included: attended a voluntary training course or workshop regarding emerging topics within your field; attended a voluntary training course or workshop regarding effective leadership; presented at a conference or workshop; served as an officer, board member, or committee member of an organization other than your current employer. Upon analysis, the statements intended to measure self-directed professional development attitudes were found to be unreliable. Based on this discovery, the researcher reviewed the existing literature to find a reliable measure of self-assessment attitudes and came across the Li et al., (2009) study. The attitude statements used in that research expressed exactly what the researcher hoped to measure, and the decision was made to use those statements within the current study in place of the statements developed by the researcher. Additional comments made by pilot participants regarding the survey design included issues with clarity of instructions and an error in numbering. Adjustments and corrections were made in these areas as appropriate. Pilot participants also commented on the length of the survey.

While the issue regarding survey length could not be addressed in this iteration of the research, it will be discussed further in the limitations section.

Full Study

A single questionnaire was used for this research study. As an incentive to participate in the study, participants were informed that upon completion of the questionnaire, they could elect to be entered into a drawing to win an Amazon gift card valued at $250. A link to a separate website facilitating the drawing was included at the

end of the questionnaire. Using a separate website for the drawing ensured confidentiality and prevented identifying information from being connected to any participant's completed questionnaire. The 37-item questionnaire was administered electronically via a well-known survey administration website. Only responses from individuals who self-reported a leadership role with at least two direct reports were included in the study.

The first portion of the questionnaire consisted of the LEQ (Hannah & Avolio, 2013). For the purposes of this study, engagement was measured as participation in self-directed professional development and attitudes regarding self-directed professional development. Participants were asked to provide their prior participation in voluntary self-directed professional development activities as well as respond to Likert scale items to indicate their attitudes related to leader self-directed professional development. Finally, participants were asked to respond to demographic questions related to their organization type, professional experience, education level, and gender. The questionnaire itself was administered electronically using an online survey platform. To protect data integrity, only one entry was allowed per IP address. No identifying information was collected by the online survey administrator; instead, each participant was given a respondent ID. All data files related to the study were password-protected. Upon accessing the link to the survey, the first screen that appeared to participants allowed them to give informed consent. The screen outlined the purpose and parameters of the study as well as risks and incentives. Participants were asked to check a box to indicate whether they agreed or disagreed to participate in the study according to the terms outlined in the informed consent language. Those participants who did not agree to informed consent were sent to a disqualification page. Upon agreeing to participate in the study, participants were

directed to the questionnaire to complete the LEQ, the participation inventory, and the attitude assessment. Once the questionnaire was completed, participants were taken to a thank you page that included a link to an online form where they could provide their email address for the drawing for a $250 Amazon gift card. The link could only be accessed by copying the URL and pasting it into a new screen on their browser. This step was taken to ensure participant confidentiality. The names of those who elected to participate in the drawing were exported to a spreadsheet, and a winner was selected at random using a random entry calculation conducted via the spreadsheet's software. The e-gift card was sent to the winning entry's email address. Both the responses to the survey and the spreadsheet containing the contact information for the gift card drawing were retained on an encrypted flash drive to which only the researcher has access and will be deleted five years after publication of the current study.

Analytical Methods

Prior to beginning the analysis, the participants' data was organized and entered into SPSS. For leader self-efficacy, each participant's responses to the 22 items were averaged per the instructions provided by the scale's creators. Each participant was assigned an LEQ composite score that was used in the final analysis. For the questionnaire on self-directed professional development participation, the number of times a participant indicated he or she had participated in each activity was tallied for both the three-month and one-year periods. The researcher found the three-month and one-year self-directed professional development participation scores were too similar to be analyzed together and gain a meaningful result due to multicollinearity which is typical of redundant variables (Morrow-Howell, 1994) As a result, the researcher decided

to use the one-year participation number. This total became the participation score. For the survey on attitude regarding self-directed professional development, the participants' responses to the six Likert scale items were averaged and became the attitude composite score used in the analysis. To aid in analysis, numerical values were assigned to gender, education level, and organization type. Professional experience was measured by the number of years the participant has spent in their current role.

To explore the relationship between leader self-efficacy, participation in self-directed professional development, and attitudes regarding self-directed professional development, a multiple linear regression was conducted to predict LEQ score based upon participation in self-directed professional development activities and attitudes regarding self-directed professional development. This statistical test was selected by the researcher specifically due to its ability to use two or more independent variables to predict the dependent variable (Leedy & Ormrod, 2016). Based upon the results of this initial analysis, three additional regression analyses were conducted to determine the extent to which the variables of gender, education level, and professional experience moderated the relationship between leader self-efficacy, participation in self-directed professional development, and attitudes regarding self-directed professional development.

To aid in the analysis, and to avoid multicollinearity, each continuous variable (leader self-efficacy, self-directed professional development participation, self-directed professional development attitudes, education level, and professional experience) was centered by subtracting the mean score from each data-point. Additionally, an interaction term was added to the regression model in SPSS for the moderating variables of gender,

education level, and professional experience. Both the original variable and the interaction term created for that variable were included within the analyses.

Limitations

Though this study was carefully designed, there are limitations to its generalizability to the target population, the first being how the research sample was identified. Sampling strategy has critical implications for the validity of a researcher's conclusions (Landers & Behrend, 2015). Convenience sampling, the approach used for this study, is a type of nonprobability or nonrandom sampling in which members of the target population are selected based upon availability (Salkind, 2012). For instance, they may meet certain practical criteria, such as geographical proximity or the willingness to participate (Dornyei, 2007). In this case, the sample met the practical criteria of meeting the definition of an organizational leader, having at least two direct reports, and being located within the Midwestern metropolitan areas where the study was conducted. Because convenience samples are not selected at random, their external validity depends on the particular characteristics of the sample and the setting and procedures of the research (Landers & Behrend). Additionally, due to the high self-selection possibility in nonprobability sampling, the effect of outliers can be more problematic (Landers & Behrend).

A second limitation of the study was survey design. During the pilot phase, several respondents indicated the 37-item questionnaire was too long. During review of the submitted surveys, the researcher noted that attrition was quite high, likely due to this issue. Attrition could also be caused by the breadth of the questionnaire. The LEQ

required a high degree of introspection and self-reflection, which caused fatigue after this portion of the survey was completed.

An additional limitation was the use of a newly designed instrument. Though validated across seven diverse samples, the LEQ is still a relatively new instrument (Hannah & Avolio, 2013). Furthermore, the self-assessment scale used to measure self-directed professional development attitudes was used in only one prior study, and specific validation protocols were not included in the current work (Li et al., 2009).

Finally, the self-directed professional development inventory was developed by the researcher for use in this study. The complete reliance on self-reported data is also a limitation. Self-reported data can rarely be independently verified, and this may have led to potential exaggeration of reported participation in self-directed professional development. Additionally, social desirability bias—the tendency to answer self-reported items in a way that deliberately or unconsciously represents oneself in a favorable light (Edwards, 1953)—could have impacted responses to the LEQ and attitude statements.

Though they may vary in purpose and structure, all organizations share a complexity caused by the fact that they are entities comprised of human beings. As a result, organizations are of great interest to researchers in the applied disciplines such as human resources, business, organizational behavior, education, sociology, and economics all of which see organizations as meaningful contexts for inquiry (Swanson & Holton, 2005). However, conducting research within an organizational setting can be wrought with challenges. While the accurate measurement of organizational behavior is essential for advancing the field, the actual tools of measurement available to organizational researchers are considered to be a major shortcoming of organizational behavior research.

This is due in large part to reliance on self-reported data (Swanson & Holton). Many of the findings disseminated to the management community are based upon self-report research. Self-reports are used to gather personality data, obtain descriptions of a respondents' past behavior, and to scale the psychological states of responses such as job attitude, tension, or motivation (Podsakoff & Organ, 1986) and are often the only feasible way to assess such constructs (Donaldson & Grant-Vallone, 2002),

Theoretical advances in organizational behavior are highly dependent upon empirical confirmation and disconfirmation. (Donaldson & Grant-Vallone, 2002). It cannot be denied that some constructs, such as attitudes and values, are perceptual in nature and are appropriately measured through self-report (Schmitt, 1994; Spector 1994). Unfortunately, self-report bias often threatens the validity of research conducted within the organizational space and thus hinders the development of the theories of organizational behavior (Donaldson & Grant-Vallone).

General self-report bias is particularly likely in organizational behavior research because of the settings in which this type of research is often conducted (Parkes, 1980). Employees often believe there is a possibility that their employer could gain access to their responses (Donaldson & Grant-Vallone, 2002). Organizational research is particularly prone to deliberate misrepresentation as participants may fear that their responses will affect promotion, pay, or job security (Whyte, 1956). It is important to note that socially desirable responding is not necessarily a deliberate behavior; it can reflect and unconscious inclination to create a positive impression, to avoid criticisms, or gain positive approval (Crowne & Marlowe, 1964). It may also betray self-deceptive

tendencies lending credence to the notion of self-perception as a motivating factor behind individual behavior (Paulhus, 1984; Paulhus & Reid, 1991).

Summary

The quantitative methodology utilized during the current research study was selected for its anticipated ability to answer the stated research questions while addressing those questions in a way that would protect the participants from risks associated with honest responses regarding their professional development engagement. The research procedures were developed with the specific goal of understanding the relationship between leader self-efficacy and engagement in self-directed professional development and any variables that might moderate this relationship. The results of the data collection and analyses are reported in Chapter IV, and the researcher explores conclusions and implications while offering recommendations for future research.

CHAPTER IV

FINDINGS AND CONCLUSIONS

Introduction

Just as the previous chapter detailed the methodology for the current study, so Chapter IV explores the results of the chosen method of analysis. The purpose of this research study was to explore the relationship between leader self-efficacy and engagement in self-directed professional development in order to gain a better understanding of the influence of self-perception on individual behavior within an organizational setting. To this end, 120 organizational leaders were surveyed to measure their level of self-efficacy as well as their degree of engagement in self-directed professional development. The survey data were then analyzed to explore potential relationships between the aforementioned variables as well as to address the following research questions:

1. What is the relationship between leader self-efficacy, attitudes toward self-directed professional development activities, and participation in leader self-directed professional development activities?
2. To what extent is the relationship between leader self-efficacy, attitudes toward self-directed professional development activities, and participation in leader self-directed professional development activities moderated by gender?

3. To what extent is the relationship between leader self-efficacy, attitudes toward self-directed professional development activities, and participation in leader self-directed professional development activities moderated by professional experience?
4. To what extent is the relationship between leader self-efficacy, attitudes toward self-directed professional development activities, and participation in leader self-directed professional development activities moderated by education level?

Findings

Participants were asked to complete the LEQ. When completing the LEQ, participants were asked to think about themselves as leaders within their organizations and to indicate their level of confidence for each of the 22 items on the scale. The options ranged from zero to 100. A score of 100 represented 100% confidence, and a score of zero indicated no confidence at all. Based upon their responses to the questionnaire, each participant was assessed a LEQ composite score between 0 and 100. Table 1 provides a representation of the distribution of the ranges of participant LEQ scores (both upper and lower limits) within the current study.

Table 1

Distribution of Participant Scores on the Leader Efficacy Questionnaire

Participation in self-directed professional development was gathered though participants' indication of the number of times they completed four specific activities related to self-directed professional development. Table 2 provides an overview of the self-directed professional development activity reported by participants, including the description of the activity and the number of times participants indicated participation in each activity over the past year.

Table 2

Participants' Self-Reported Participation in Self-Directed Professional Development Activities over the Past Year

Activity Description	Number of Times and Percentage of Times Reported					
	0	1-5	6-10	11-15	16-20	21+
Attended a voluntary training course or workshop regarding emerging topics within your field	27	79	8	2	2	2
	22.5%	65.8%	6.7%	1.6%	1.6%	1.6%
Attended a voluntary training course or workshop regarding effective leadership	36	79	2	2	0	1
	30%	65.8%	1.6%	1.6%	0%	0.8%
Presented at a conference or workshop	43	65	6	2	0	4
	35.8%	54.2%	5%	1.6%	0%	3.2%
Served as an officer, board member, or committee member of an organization other than your current employer	53	54	11	1	0	1
	44.2%	45%	9.2%	0.8%	0%	0.8%

In order to measure participant attitudes related to self-directed professional development, participants were asked to review an inventory consisting of six attitude statements and to enter a response ranging from zero, meaning "Not at All," to six, meaning "Extremely," regarding the degree to which each attitude statement reflected their views on self-directed professional development and leader engagement in self-directed professional development activities. Table 3 provides an overview of the participants' responses, as well as the actual attitude statements adapted from the study conducted by Li, Favreau, and West (2009) and used in the current study.

Table 3

Participants' Responses to Attitude Statements Related to Self-Directed Professional Development

Attitude Statement	Not at All					Extremely
	1	2	3	4	5	6
"Those who serve in leadership should continually seek out opportunities to enhance their skill set."	0	0	4	17	42	57
	0%	0%	3.3%	14.1%	35%	47.5%
"I have a good understanding of how to assess my own skills."	0	2	3	21	62	32
	0%	1.6%	2.5%	17.5%	51.6%	26.6%
"I am confident in my ability to identify my strengths."	0	2	5	15	58	40
	0%	1.6%	4.2%	12.5%	48.3%	33.3%
"I am confident in my ability to identify my areas for improvement."	0	2	7	23	48	40
	0%	1.6%	5.8%	19.2%	40%	33.3%
"I continuously assess my own performance."	0	2	7	16	53	42
	0%	1.6%	5.8%	13.3%	44.2%	35%
"Lifelong learning is necessary to being an organizational leader"	0	2	4	10	37	67
	0%	1.6%	3.3%	8.3%	30.8%	55.8%

As part of the preliminary analysis for this study, each participant was assessed a composite score for leader self-efficacy and self-directed professional development participation and attitude. For leader self-efficacy, the responses of each participant were averaged per the instructions provided by the scale's creators. The participation composite score was determined by calculating the total number of self-directed professional development activities reported by each participant over the past year. Finally, the attitude composite score was taken from the average of the participants'

responses to the six Likert scale attitude statements. The composite scores were used to facilitate the analysis conducted to address the research questions as outlined below.

Research Question 1: What is the relationship between leader self-efficacy, attitudes toward self-directed professional development activities, and participation in leader self-directed professional development activities? To address the first research question, a linear regression was conducted with a view to predicting scores on the LEQ based on degree of participation in self-directed professional development activities and attitude toward self-directed professional development. An overall statistically significant regression equation was found: $R^2 = .444$, $F(2,117) = 46.78$, $p < .0001$. Although individual analysis of the variables found attitude toward self-directed professional development to be a significant predictor of LEQ score ($p < .001$, $\beta = 12.74$), participation in self-directed professional development activities was not ($p = .973$). The results of the regression indicated a 12.74-point increase in LEQ score for every unit increase in attitude score. Table 4 provides the results of the initial regression analysis.

Table 4

Multiple Regression Analysis Predicting Leader Self-Efficacy from Participation in Self-Directed Professional Development and from Self-Directed Professional Development

Predictor	*B*	*SE B*	*β*	*T*	*p*
SDPD Participation	-.002	.053	-.002	-.034	.973
SDPD Attitudes	12.744	1.346	.667	9.468	.0004

After a determination that participation in self-directed professional development did not predict LEQ score but that attitude score did, the attitude variable was analyzed

along with the moderating variables of gender, professional experience, and education level in order to discover whether the introduction of these variables would alter the strength or direction of the relationship. Information related to gender, education level, and professional experience was taken from the participants' responses to the demographic portion of the questionnaire and applied as appropriate to research questions two through four.

Research Question 2: To what extent is the relationship between leader self-efficacy, attitudes toward self-directed professional development activities, and participation in leader self-directed professional development activities moderated by gender? Information related to gender was collected through the demographic section of the questionnaire. The final sample included 64 women and 56 men. To determine whether gender moderated the relationship established during analysis of the first research question, an interaction term between LEQ score and self-directed professional development attitudes was added to the regression model. Again, attitude was found to be a statistically significant predictor of LEQ score ($p < .0001$), but interaction between attitude and gender was not ($p = .384$). Such a finding suggests that gender does not moderate the relationship between leader self-efficacy and attitudes toward self-directed professional development.

Research Question 3: To what extent is the relationship between leader self-efficacy, attitudes toward self-directed professional development activities, and participation in leader self-directed professional development activities moderated by professional experience? To address the third research question, two interaction terms were introduced to the regression model. Within the context of the current study, professional experience

was measured by combining total years of post–high school professional experience and total number of years spent in current role. The data for both variables were taken from the demographic information reported by participants. Table 5 provides an overview of self-reported professional experience of participants.

Table 5

Number of Years of Post-High School Professional Experience and Number of Years in Current Professional Role as Reported by Participants

Number of Years	Years Post-High School Professional Experience		Years in Current Professional Role	
	n	%	*N*	%
0-5	7	15.8	24	20
6-10	13	10.8	35	29.2
11-15	26	21.6	26	21.7
16-20	17	14.2	16	13.3
21-29	15	12.5	9	7.5
30+	42	35	10	8.3

First, the total number of years in current role was entered into the regression model. Although the relationship between LEQ score and attitudes toward self-directed professional development remained statistically significant ($p < .0001$), the number of years a participant had been in his or her current professional role did not ($p = .229$)—suggesting that this aspect of overall professional experience does not moderate the relationship between leader self-efficacy and attitudes toward self-directed professional development.

A second aspect of professional development was explored in this study: total number of years of post–high school professional experience reported by participants. In this case, not only did the relationship between leader self-efficacy and attitudes toward self-directed professional development remain statistically significant ($p < .0001$), but number of years of post–high school experience was also found to moderate the relationship ($p = .009$; $\beta = -.261$). The results of the regression indicated that as attitude score increased, LEQ score increased. However, this increase occurred most prominently at low levels of post-high school professional experience. Consequently, the effect of attitude on leader self-efficacy weakens at higher levels of total post-high school professional experience. It should be noted that the observed effect of the interaction was moderate and should be probed further through additional research in order to fully understand the relationship.

Research Question 4: To what extent is the relationship between leader self-efficacy, attitudes toward self-directed professional development activities, and participation in leader self-directed professional development activities moderated by education level? The final research question sought to determine the degree of moderating effect exerted by education level on the relationship between LEQ score and attitudes toward self-directed professional development established during analysis of the first research question. Table 6 provides an overview of self-reported education level of participants in the current study.

Table 6

Last Completed Level of Education

	n	%
Less than high school	0	0%
High school	6	5%
Trade/technical training	2	1.6%
Some college	8	6.7%
An Associate degree	11	9.2%
A Bachelor's degree	53	44.2%
A Master's degree	30	25%
A professional degree (DDS, JD, MD)	4	3.3%
A Doctorate (PhD, EdD)	6	5%

Education level was entered into the regression model as an interaction term. As for prior research questions, the relationship remained statistically significant ($p < .0001$), but individual analysis of the variables revealed that education level did not moderate the relationship between leader self-efficacy and attitudes toward self-directed professional development ($p = .954$).

In all, the relationship between leader self-efficacy and attitudes towards to self-directed professional remained significant despite the introduction of gender and education level as moderating variables. However, the results of the analysis did identify the number of years of post-high school experience as a moderator of the relationship. Table 7 lists the results of the multiple regression analysis of proposed moderators of the

relationship between leader self-efficacy and attitude toward self-directed professional development.

Table 7

Multiple Regression Analysis of Proposed Moderators of the Relationship between Leader Self-Efficacy and Attitude toward Self-Directed Professional Development

Moderator	*B*	*SE B*	*β*	*T*	*p*
Gender	–2.299	2.632	–.193	–.873	.384
Years Employed Post–High School	–.261	.098	–.179	–2.662	.009
Years in Current Role	.181	.150	.086	1.208	.229
Education Level	.042	.719	.004	.058	.954

Conclusions

In summary, the current study did not find a statistically significant relationship between leader self-efficacy and participation in self-directed professional development activities, but did find such a relationship between leader self-efficacy and attitudes towards toward self-directed professional development as leader self-efficacy scores increased by 12.61 points for every unit increase in attitude score. Taken together, the current study's findings indicate that self-reported participation in self-directed professional development falls outside the scope of individual behaviors that can predict leader's perceptions of self-efficacy, suggesting that participation in such activities may not be viewed as an accomplishment in the same way that completion of a formal degree program, implementation of a new program within a work setting, or maintenance of professional skills might be. The results of the study also suggest that highly efficacious leaders are more likely to believe in the value of lifelong learning and ongoing self-assessment for organizational leaders. Furthermore, the findings indicate that individuals

who hold these attitudes are likely to be more successful in their attempts to organize the positive psychological capabilities, motivation, means, collective resources, and courses of action required to attain effective, sustainable performance across their various leadership roles, demands, and contexts which is how leader self-efficacy manifests itself within an organizational setting (Hannah et al., 2008, p. 670). This positive relationship, however, was found to weaken as individuals advanced in their professional careers.

The impetus for the current study was the desire to better understand the degree to which self-perceptions influence individual behavior in an organizational setting. Although not all variables of interest were found to be statistically significant for this relationship, high levels of leader self-efficacy were not found to preclude a belief in the value of self-directed professional development—a finding pertinent to the original research question.

Implications and Recommendations

Implications

The rapid change that characterizes the environment in which modern organizations operate calls for a workforce that is both skilled and adaptable. Today's organizations rely on their leaders to meet a variety of overarching goals and objectives and, by doing so, to put the organization on a course for long-term success. Although the stated purposes of organizational activities may be fairly straightforward, the organizational environment becomes highly complex when taking into account the backgrounds, attitudes, and needs of the individuals who make up the workforce. As a result, the finding that leader self-efficacy increases with positivity of attitude toward self-directed professional development has notable potential implications for

organizations' leader selection protocols. Certainly leader self-efficacy has been clearly established within the literature as a contributor to effective leader performance, making it a desirable trait for organizations seeking new leaders, but the current study adds a new dimension to this understanding: When seeking to identify future leaders and develop their leadership ability, it may be beneficial to seek out leadership candidates who display positive attitudes toward self-directed learning, under the assumption that they will be more efficacious over time and consequently more effective in their roles.

The findings of the current study also reinforce the importance of recognizing the complexity of individuals. The current study's finding that professional experience moderates the positive relationship between leader self-efficacy and attitudes related to self-directed professional development has particular implications for organizations where leaders have been experiencing burnout or malaise due to the demands of their roles. Individuals who believe in the importance of self-assessment and lifelong learning are valuable assets to organizations—and for precisely this reason, they should be protected and managed in the same way as any other form of capital. Existing research into self-directed professional development has already clearly identified resources as one of the motivating factors behind individuals' participation in these activities, and the results of the current study suggest that similar resources should be directed to ensuring the well-being of employees and thereby maintaining the high performance trajectory of efficacious leaders who are dedicated to professional improvement.

The most important implication of the current study, however, is the resulting shift from focusing on the output of self-reports of participation in self-directed professional development to focusing on self-perceptions and how they can be channeled

by organizations for their benefit, adding a new aspect of consideration to the concept of human resources. Organizations have invested significant resources in providing and supporting employee engagement in training and development programs that will make them more effective in their roles, however, the findings of the current study suggest that the same effort should be directed towards cultivating positive attitudes towards beneficial professional learning and activities in order to support positive efficacy perceptions among the organization's leaders resulting in a more productive and effective workforce. Additionally, the results of the current study call into question the importance of professional development activities' being voluntary or self-directed for maximum effectiveness. The current study's finding that level of leader self-efficacy had no bearing on whether an individual participated in self-directed professional development activities despite his or her positive attitude toward and belief in the importance of such activities thus indicates an area that needs to be better understood—and, begs the question of whether an activity's voluntary nature leads to greater benefits than are to be had by making that activity mandatory for those who believe in its importance. Although the structure of the current study was designed to explore whether leader self-efficacy served as a barrier to participation in self-directed professional development, the results of the study suggest a turn toward focusing on the benefits of leader self-efficacy for leaders and organizations as well as toward exploration of how cultivating positive attitudes toward professional develop could, in turn, produce more efficacious leaders.

Recommendations

The results of this study provide several opportunities for replication and future research by addressing its four major limitations. These limitations include the chosen

sampling strategy and survey design as well as the use of fairly new instruments and the reliance on self-reported data. Future researchers would do well to explore the relationship between leader efficacy perceptions and participation in self-directed professional development through a research design that utilizes a sampling strategy other than convenience sampling as well as a larger sample size overall. Additionally, greater understanding of this relationship might be achieved by focusing on a single type of organization (e.g., a nonprofit organization or a healthcare organization) and thereby increasing the generalizability of the findings made. Future research could also address the two most significant limitations of the current study: its use of newly developed or researcher-developed instruments and the length of the questionnaire.

A notable limitation of the current study was its use of a questionnaire that participants deemed overly long. Both during the pilot phase and during the administration of the full survey, participants commented negatively on the length of the survey. Not surprisingly, the attrition rate was very high. In order to carry forward this line of research, future researchers should consider identifying a single area of leader self-efficacy to examine along with engagement in self-directed professional development. As previously explained, the LEQ contains three separate subscales based upon Leader Self and Means Theory (Hannah & Avolio, 2013). The subscales include: Leader Action Self-Efficacy, Leader Self-Regulation Efficacy and Leader Means Efficacy. The developers of the LEQ state that each subscale can be examined as an independent construct. Requiring participants to only respond to items related to a specific subscale would reduce the number of questions in that section of the survey from 22 to only seven or eight depending on the subscale selected. Not only would this reduce

the length of the overall questionnaire, it would also allow future researchers to specifically identify which aspects of leader self-efficacy play a significant role in the relationship between leader self-efficacy and engagement in self-directed professional development.

As stated previously, the current study utilized relatively new or researcher developed instruments to measure the variables of interest. While general self-efficacy is a well-established construct within the existing literature, leader self-efficacy is a relatively new area of focus leaving a limited number of validated instruments at researchers' disposal. While the LEQ has been validated across seven diverse sample groups (Hannah & Avolio, 2013), the instrument has only been available for use since 2013. Regarding the instruments used to measure engagement in self-directed professional development, the attitude statements adapted from Li et al., (2009) have only been used in one prior study for which validation protocols and results were not published. Moreover, the inventory used to capture self-directed professional development participation was developed by the researcher for use in this study. The decision to create an inventory for use in this study was necessitated by an inability to identify an instrument that would facilitate self-reporting of instances of participation without also requiring the participant to provide feedback regarding the value or effectiveness of the activity; aspects of self-directed professional development which fall outside the scope of the current study. Based upon the findings of the current study, future research focused on exploring the development of an inventory concentrated solely on participation in and attitude towards self-directed professional development would be a positive addition to the professional development literature.

The current study relied heavily on self-reported data in the major variables of interest. While this method was effective in collecting the desired data, it does render the results subject to the concerns often associated with self-reported data, mostly the risk that social desirability bias may have impacted participants' responses to the questionnaire (Edwards, 1953). This is specifically of concern in the area of attitudes related to self-directed professional development as many organizational leaders are likely to be reluctant to unequivocally deny the importance of self-assessment. The current study hoped to minimize this risk by surveying organizational leaders outside of their work environment so that there would be limited concerns regarding an employer or colleague gaining access to the results of this study. Despite these safeguards, it would be beneficial for future researchers to work towards developing an instrument that indirectly measures individual attitudes toward behaviors related to professional competency in order to minimize the influence of socially desirable self-reporting.

Finally, future researchers should explore the nuances of professional experience with a view to determine how leaders' self-efficacy may change over the lifespan of their post–high school professional careers and, if so, identify the causative factors. These nuances should include number of years spent in leadership roles as well as industry and type of work engaged in and should take into account any interactions between that information and education level and gender. Additional lines of inquiry could include an exploration of how organizational leaders' degree of employee well-being and leader burnout fit into the relationship between leader self-efficacy and attitudes toward self-directed professional development, the better to understand the current study's findings.

In summary, the central problem introduced at the onset of this study was the possibility that the efficacy perceptions of leaders could potentially impact their engagement in highly beneficial self-directed professional development activities. In order to determine whether this concern was justified, the relationship between leader self-efficacy, and engagement in self-directed professional development was analyzed via a regression analysis that sought determine whether leader self-efficacy could be predicted by participation in self-directed professional development or attitudes related to self-directed professional development. Additional steps were taken to determine the role of gender, professional experience, and education level. The result of this analysis was the finding that there was no relationship between leader self-efficacy and participation in self-directed professional development, but there was a statistically significant relationship between leader self-efficacy and attitudes related to self-directed professional development, a relationship which was be found to be moderated by lifelong professional experience.

In its search for a link between perception and behavior, the current study revealed a link between self-perception and attitude instead. This link provides many interesting lines of inquiry for future research including justification for an in-depth exploration of how leader self-efficacy specifically and self-perception in general influences individual behavior within an organizational setting. As organizational leaders are entrusted by stakeholders to steward the organization's resources and direct its activities, an understanding of the internal and external forces that may impact individual behavior decisions is critical.

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Appendix A

Permission for Use: Leader Efficacy Questionnaire

Lauren Johnson

mind garden

To whom it may concern,

This letter is to grant permission for Lauren Johnson to use the following copyright material for his/her research:

Instrument: **Leader Efficacy Questionnaire**

Authors: **Sean T. Hannah and Bruce J. Avolio.**

Copyright: **Leader Efficacy Questionnaire Copyright (c) 2013 by Sean T. Hannah and Bruce J. Avolio.**

Three sample items from this instrument may be reproduced for inclusion in a proposal, thesis, or dissertation.

The entire instrument may not be included or reproduced at any time in any other published material.

Sincerely,

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Appendix B

Permission for Use: Self-Assessment Attitude Statements

Re: Attitudes Regarding Self-Directed Learning Survey Question- Seeking Permission for Use within a Dissertation

Hi Lauren,

Yes, you may include in your dissertation with attribution. Thank you!

Best,

Su-Ting

Su-Ting Li, MD, MPH

Professor, Pediatrics

Residency Program Director

Vice Chair of Education

University of California, Davis

2516 Stockton Blvd, Room 220

Sacramento, CA 95817-2233

(916) 734-2428

FAX (916) 734-0342

sutli@ucdavis.edu

From: Lauren Johnson <lnjohnson@olivet.edu>

Sent: Sunday, February 17, 2019 2:17 PM

To: Su-Ting T Li

Subject: Re: Attitudes Regarding Self-Directed Learning Survey Question-Seeking Permission for Use within a Dissertation

Dear Dr. Li,

My name is Lauren Johnson and I am a doctoral student from Olivet Nazarene University in Bourbonnais, IL.

You may recall that I reached out to you in January 2018 to regarding your 2009

study entitled P*ediatric resident and faculty attitudes toward self-assessment and self-directed learning: a cross sectional study*. At that time, you graciously allowed me to use several of the survey items from that study within my own dissertation (with the understanding that they may need to be adapted) including:

I have a good understanding of how to assess my own skills.

I have a good understanding of what it means to be a self-directed learner.

I am confident in my ability to identify my strengths.

I am confident in my ability to identify my areas for improvement.

I continuously assess my own performance.

Lifelong learning is necessary to being a physician (will need to be changed to organizational leader).

My dissertation committee is now requesting that I reach out to you for explicit permission to publish these statements within my dissertation document along with my findings. I have taken every step to ensure that these statements are properly cited.

If the information above is deemed acceptable, I would be very appreciative if you could reply to this email with a statement reflecting your permission.

Thank you for your consideration. I am happy to answer any questions you may have regarding this request or my research study as a whole.

Lauren Johnson

lnjohnson@olivet.edu

From: Su-Ting T Li <sutli@ucdavis.edu>

Sent: Thursday, January 18, 2018 10:03 AM

To: Lauren Johnson

Cc: Su-Ting T Li

Subject: RE: Attitudes Regarding Self-Directed Learning Survey Question-Seeking Permission for Use within a Dissertation

Yes, you may use these questions for your survey. Thank you for citing my work. I look forward to seeing your results.

Best,

Su-Ting

Su-Ting Li, MD, MPH

Professor, Pediatrics

Residency Program Director

Vice Chair of Educa_on

University of California, Davis

2516 Stockton Blvd, Room 220

Sacramento, CA 95817-2233

(916) 734-2428

FAX (916) 734-0342

sutli@ucdavis.edu

From: Lauren Johnson [mailto:lnjohnson@olivet.edu]

Sent: Thursday, January 18, 2018 7:16 AM

To: Su-Ting T Li

Subject: Attitudes Regarding Self-Directed Learning Survey Question-Seeking Permission for Use within a Dissertation

Dear Dr. Li,

My name is Lauren Johnson and I am a doctoral student from Olivet Nazarene University in Bourbonnais, IL. I am in the process of writing my dissertation tentatively titled Leader Efficacy Perceptions and Engagement in Self-Directed Professional Development under the direction of my dissertation committee chaired by Dr. Jonathan Bartling. During my review of the literature, I came across your 2009 study entitled Pediatric resident and faculty attitudes toward self-assessment and self-directed learning: a cross-sectional study. I am writing to request permission to use a portion of the survey items included in that study as part of my own study of attitudes regarding self-directed learning. The participants in my study will be non-physician organizational leaders so some of the questions may need to be modified. In summary, I am requesting permission to include the following items in my survey:

I have a good understanding of how to assess my own skills.

I have a good understanding of what it means to be a self-directed learner.

I am confident in my ability to identify my strengths.

I am confident in my ability to identify my areas for improvement.

I continuously assess my own performance.

Lifelong learning is necessary to being a physician (will need to be changed to organizational leader).

Should you see fit to grant my request, please be assured that I will use this survey only for my research study and will not sell or use it with any compensated or curriculum development activities. Additionally, I will be sure to properly cite the items that I use and you will be sent a copy of the results of my study.

If the information above is deemed acceptable, I would be very appreciative if you could reply to this email with a statement reflecting your permission.

Thank you for your consideration. I am happy to answer any questions you may have regarding this request or my research study as a whole.

Sincerely,

Lauren Johnson

lnjohnson@olivet.edu

Appendix C

Self-Directed Professional Development Inventory

Self-Directed Professional Development Questionnaire

To be administered electronically.

Within the past year, how often have you participated in the following activities?

1. Attended a voluntary training course or workshop regarding emerging topics within your field
2. Attended a voluntary training course or workshop regarding effective leadership
3. Presented at a conference or workshop
4. Served as an officer, board member, or committee member of an organization other than your current employer

Within the 3 past months, how often have you participated in the following activities?

1. Attended a voluntary training course or workshop regarding emerging topics within your field
2. Attended a voluntary training course or workshop regarding effective leadership
3. Presented at a conference or workshop
4. Served as an officer, board member, or committee member of an organization other than your current employer

(The following items are used with permission of Su-Ting Li, MD, MPH, Professor, Pediatrics, Residency Program Director, Vice Chair of Education, University of California, Davis)

To what extent does each of the following statements describe your beliefs regarding professional development for organizational leaders?

"Those who serve in leadership should continually seek out opportunities to enhance their skill set."

1_____2_____3_____4_____5_____6

Not at all **Extremely**

"I have a good understanding of how to assess my own skills."

1_____2_____3_____4_____5_____6

Not at all **Extremely**

"I am confident in my ability to identify my strengths."

1_____2_____3_____4_____5_____6

Not at all **Extremely**

"I am confident in my ability to identify my areas for improvement."

1_____2_____3_____4_____5_____6

Not at all **Extremely**

"I continuously assess my own performance."

1_____2_____3_____4_____5_____6

Not at all **Extremely**

"Lifelong learning is necessary to being an organizational leader"

1_____2_____3_____4_____5_____6

Not at all **Extremely**

Appendix D

Solicitation for Survey Participants Email

Participate in Leadership Research for a Chance to Win a $250 Amazon Gift Card!

Lauren Johnson, a doctoral candidate at Olivet Nazarene University, is looking for participants for a study on leader professional development. Participants should be adults who live or work within the Chicagoland area and serve as organizational leaders to whom at least two employees report directly. The study will help us learn more about how and why leaders decide to participate in professional development activities. The study is an online survey that takes about 15 minutes to complete. Participants who complete the survey will be invited to enter a drawing for an Amazon gift card valued at $250.

Step 1: On your laptop or PC open your web browser and enter the following link:
https://www.surveymonkey.com/r/D9D9FQD

Step 2: Complete the survey

Step 3: Follow the link on the last page of the survey to enter the drawing for a $250 Amazon Gift Card.

If you have questions at any time about the study or the procedures, you may contact the researcher, Lauren N. Johnson at lnjohnson@olivet.edu

Lauren Johnson, MNA
lnjohnson@olivet.edu