

DEVELOPMENT OF A NOMOLOGICAL NET SURROUNDING LEADER SELF-
DEVELOPMENT

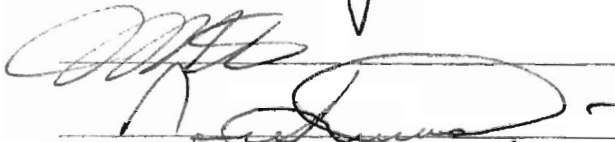
by

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A dissertation submitted in partial fulfillment of the requirements for the degree of
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George Mason University, 2004

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ABSTRACT

DEVELOPMENT OF A NOMOLOGICAL NET SURROUNDING LEADER SELF-DEVELOPMENT

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George Mason University, 2008

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The purpose of this study was to examine both antecedents and consequences of high quality leader self-development activities. Specifically, Study 1 sought to delineate factors that impact the quality attributes of leader self-development activities and the effect of those attributes on performance outcomes. Study 2 investigated the impact of a training program to understand if leaders can be trained to make more effective decisions regarding the attributes in their self-development activities. Leaders from a multilevel marketing company completed two surveys over a period of three months with a training intervention in between the surveys. Data from the first survey administration (Study 1) demonstrated that engagement in high quality leader self-development activities is important to growing two types of performance. Specifically, experiential variety and the level of learner control in leader self-development activities positively impacted adaptive performance. Experiential variety was also a significant predictor of the performance of

one's team, indicating that engaging in a greater variety of leader self-development activities helps to foster leader effectiveness. Further, Study 1 results showed additive and multiplicative effects of motivational variables (leader self-identity and modeling behaviors from the leaders' own leaders) and individual skill variables (self-appraisal and self-regulation skills) in the prediction of quality attributes. Study 2 examined the impact of training and demonstrated that leaders can be trained to impact choices regarding their self-development activities. Results showed that individuals who received training on the processes associated with effective leader self-development were not only more likely to engage in leader self-development activities, but those subsequent activities were more challenging and allowed for more learner control and learner engagement.

Introduction

The dynamism of today's work environment requires that employees continually develop and learn new skills. In an environment where formal company training cannot be conducted for every skill-domain combination necessary for success, employees need to engage in self-development activities to stay competitive. Self-development is a process that individuals undertake in order to gain knowledge or strengthen a skill-set (Confessore & Kops, 1998). One specific skill-set that employees must self-develop (at least in part) is that related to leadership. As a strategy to contend with the dynamic environment, organizations are becoming flatter and more complex, requiring leaders to exist in every node of the organization (Day & Halpin, 2004). However, because of ever-changing work demands, identifying particular skills that each leader needs now and in the future is extremely difficult (Hall, 1986). The idiosyncratic nature of these needs demands that employees take some of the responsibility for their own leader development. Gaining an understanding of how this development takes place may be one of the best ways to begin to succeed in the dynamic work environment (Halpern, 2004).

As the need for employees to engage in effective leader self-development becomes more pervasive, empirical research investigating factors that influence the quantity and quality of employees' leader self-development should mirror this need. The purpose of this dissertation is to examine such factors. Specifically the focus is on three

sets of predictors: organizational support factors related to external leader behaviors; individual motivational factors that stem from self-identity; and learning tools that guide employees during the process of leader self-development by giving rise to certain skill-sets. The overarching thesis of this dissertation is that environmental and individual factors influence employee engagement in leader self-development activities and their success in performing these activities. Study 1 in this research examines antecedents of leader self-development activity attributes and also tests relationships between engagement in high quality leader self-development activities and outcomes associated with leader effectiveness (namely adaptive performance and the performance of one's subordinates). Study 2 expands upon the findings from Study 1 and illustrates that individuals can be trained to make more effective choices about the attributes of their leader self-development activities.

One of the specific contributions of this dissertation is the examination of the relationships between attributes of the self-development activities in which employees choose to engage and adaptive performance. Leaders must perform adaptively in order to succeed (Heifetz & Linsky, 2002). In order to respond to this need, leader development must change and expand one's conceptual representation of how environmental elements interact (Boyce, Zaccaro, & Wisecarver, 2007). This dissertation proposes that when self-development activities possess certain qualities (e.g., challenge), one's conceptual representation expands, hence leading to greater levels of adaptive performance.

Another specific contribution is the examination of the influence of external leader behaviors on the self-development of employees. Although leaders are an

influential part of the organizational environment, there has not been research to demonstrate the specific impact of leader behavior on followers' self-development activities. This research examines the impact of leader modeling behavior on an employee's leader self-development activities. The use of behavioral models (Bandura, 1977; 1986) was demonstrated as influential to the development of leader processes (e.g., Latham & Saari, 1979), and hence is thought to influence the leader development process itself.

A third contribution of this dissertation is the examination of the quality of leader self-development activities (c.f., Orvis, 2007); this examination highlights the idea that self-developers must make choices regarding these attributes. Certain kinds of developmental activities are more likely to lead to individual growth and development than others, and this distinction must be made. A detailed description of the instructional design attributes that define the quality of leader self-development activities follows in the sections below.

The next section presents an examination of the current state of the literature on the main variables of interest. It begins with a discussion of why leader self-development is important for individuals and organizations. The discussion then transitions to a review of the proposed antecedents to leader self-development, including external leader behaviors and self-identity, and finally moves to a discussion of skills that should influence engagement in leader self-development activities; an examination of how these skills can be trained is found in Study 2.

Leader Self-Development

Leader Self-Development Defined

Leader self-development is defined as “a process in which leaders take personal responsibility for initiating, sustaining, and evaluating growth in their own leadership capacities and in their conceptual frames about the conduct of leadership” (Boyce, et al, 2007, p. 7). This development can occur through any number of outlets, including job experiences and seminar courses (Noe & Wilk, 1993) as long as it is initiated by the self-developer and not mandated by the organization (Maurer & Tarulli, 1994). As a specific form of leader development, leader self-development should bring about an evolution in how one makes sense of experiences (Van Velsor & Drath, 2004) and expand one’s capacity “to be effective in leadership roles and processes” (Van Velsor & McCauley, 2004, p. 2). This increased capacity should be a product of an expanding frame of reference, or perspective, on the self and the surrounding environment, indicating a more complex understanding of what it means to be effective at leader processes.

The growth of a complex frame of reference is extremely important for leaders. By definition, leaders operate in complex environments that involve ill-defined situations and problem-solving (Zaccaro & Klimoski, 2001). To handle the plethora of information present in the environment, leaders’ frames of references must be exceptionally complex and continually expand when attending to new environmental cues. Leader self-development activities are more likely to facilitate this expansion of one’s frame of reference and leader capacity if the self-development activities possess certain attributes.

Hence, as mentioned, this dissertation not only examines the frequency with which employees engage in self-development, but also the *quality* of these self-

development activities. Most research on self-development has paid attention to the former (e.g., Boyce, 2004; Maurer Weiss, & Barbeite, 2003), or has examined intentions to participate in future self-development activities (e.g., Maurer & Tarulli, 1994; McEnrue, 1989). While these are important outcomes to assess, examining the quality of self-development activities goes a step further; even if employees engage in self-development processes daily, choosing to engage in high quality activities should promote more effective development of the targeted skills (Orvis, 2007).

Instructional Design Attributes Encompassing Quality

Based on a thorough review of various literature bases (i.e., instructional design; adult learning and education; training and development), Orvis (2007) identified several attributes that reflect high quality instruction within a self-development activity. Specifically, she identified content relevancy, learner engagement (encompassing both practice and progress evaluation information), challenge, and learner control¹ as characteristics of a high quality self-development activity. Table A1 in Appendix A (adapted from Orvis) defines each of these attributes. Although these attributes are identified as applicable to self-development activities, these attributes also transfer to the more specific examination of *leader* self-development.

This dissertation also includes a fifth attribute of quality, experiential variety of the activities, which is specific to leader self-development. Experiential variety is operationalized by the number of qualitatively different activities in which an individual

¹ Orvis termed the “learner control” dimension as the “structure” of the self-development activity. However, in order to clearly convey the idea that less structured activities provide self-developers with greater responsibility for their own development, the term “learner control” is used here.

engages. A variety of development experiences is essential to the leader development process (Van Velsor & McCauley, 2004). Specifically, this research tests the proposition that experiential variety is necessary for developing the complex frames that lead to adaptive performance within leaders (c.f., Ely, Zaccaro, & Conjar, in press).

Consequences of Self-Development

Leaders perform and operate in ambiguous, rapidly changing environments and are required to recognize change and effectively modify old patterns of behaviors in accordance with new situational demands. In other words, they must engage in adaptive performance. Adaptive performance requires continuous learning given that leaders are never fully aware of situational circumstances until that situation is encountered; this type of performance differs from technical performance given that the latter can be solved through the implementation of solutions currently in one's repertoire (Heifetz & Linsky, 2002). Therefore, leader self-development, which promotes continuous learning, is proposed as one method to grow adaptive performance. Specifically, an expanding frame of reference during leader self-development activities should impact adaptive performance. By gaining such complexity, individuals have the cognitive skills to integrate information to create new behavioral patterns (Smith, Ford, & Kozlowski, 1997). The failure to change old habits of thinking and behavior is considered one of the most common sources of leadership derailment (Heifetz & Linsky, 2002).

Hall (1986) proposed that adaptive people have experienced change within their work environment, thus subjecting them to a variety of experiences. Provided that there are surface similarities that cut across changing situations, individuals will be prompted

to integrate information from one activity to the next (Gick & Holyoak, 1983), facilitating more complex thinking. Evidence for experiential variety as instrumental in the development of more complex ways of thinking can be found in Kolb's (1984) Experiential Learning Theory (ELT). One of the main tenets of this theory is that perceptual complexity is increased when exposed to differing points of view. Ely, et al (in press) delineate three processes through which experiential variety fosters perceptual complexity and hence adaptive performance. First, experiential variety fosters self-regulation processes which enable individuals to monitor the environment for change. Second, experiential variety provides individuals with the opportunity to practice changing their perspectives upon encountering different situations. Finally, Ely et al. propose that experiential variety creates flexible knowledge structures by calling for individuals to identify common themes across situations. These three processes prompt individuals to recognize change in the environment and respond with a functional behavioral response that is not currently part of their routinized responses. Therefore, as noted earlier, the experiential variety of leader self-development activities is essential for enhancing adaptive performance.

Challenge, another quality attribute of leader self-development activities, is also likely to contribute to adaptive performance. Choosing to engage in challenging leader self-development activities should increase adaptive performance by moving individuals out of their "comfort zones" into stretch activities that test current perspectives. By engaging in leader self-development activities that require an exertion of mental or physical effort, self-developers are required to produce responses and engage in actions

that are necessary for development (Van Velsor & McCauley, 2004), prompting the development of more complex frames of reference necessary for adaptive performance.

Although challenge and experiential variety are likely related to some degree, they also are distinct attributes. A leader self-development activity can be challenging but not provide experiential variety, and vice versa. Also, although other attributes of leader self-development activities may impact adaptive performance, based on the research outlined above, it is thought that these two attributes are particularly important for moving leaders away from only engaging in routine or technical performance. From this discussion, I make my first hypothesis:

Hypothesis 1: Leaders who engage in self-development activities with a) higher challenge and b) greater experiential variety display higher adaptive performance.

Organizations that foster self-development within employees derive many benefits including specialized skills within self-developers that help organizations get ahead (Maurer, Pierce, & Shore, 2002). Engagement in leader self-development activities also has the potential to impact leader effectiveness, which is beneficial to the organization. Drawing from functional leadership theory and team leadership theory, this dissertation operationalizes leader effectiveness as the performance of a leader's team. Functional leadership theory asserts that the main job of a leader is to take care of any team needs that are not being sufficiently handled (Hackman & Walton, 1986; McGrath, 1962). This theory serves as the basis for team leadership theory, which highlights the necessity of leadership processes to team functioning (e.g., Zaccaro, Rittman, & Marks, 2001; Kozlowski, Gully, Salas, & Cannon-Bowers, 1996). Effective leadership processes

provide the direction for teams in dynamic environments (Zaccaro et al., 2001) and pave the way for effective team performance. Kane, Zaccaro, Tremble, and Masuda (2002) empirically supported team leadership theory by demonstrating that successful enactment of leadership functions influenced team performance. In a recent meta-analysis, Burke, et al. (2006) demonstrated that perceived team effectiveness, team productivity, and team learning were predicted by leader behaviors. These studies provide evidence that leaders are one of the most critical factors in team performance (Zaccaro, et al., 2001). It is the assertion of this dissertation that engagement in high quality leader self-development activities leads to increased leader effectiveness, which in turn, manifests itself in team performance. In other words, improved team performance is one measure of enhanced leadership skills developed through high quality leader self-development activities.

Accordingly, the second hypothesis is made:

Hypothesis 2: The teams of leaders who participate in leader self-development activities that a) are more content relevant, b) provide more learner engagement, c) are more challenging, d) allow for more learner control and e) provide more experiential variety display higher team performance.

Motivational Antecedents of Self-Development

The self-development literature has focused on both the environment and the individual as predictors of engagement in self-development activities; most research, however, has paid more attention to the latter. For example, several researchers have reported that organizational commitment (McEnrue, 1989) and job involvement (Maurer & Tarulli, 1994) are significant predictors of participation in self-development activities.

One subset of antecedents that has been studied extensively is motivation-based predictors, such as motivation to learn (Noe & Wilk, 1993) and career motivation (London, Larson, & Thisted, 1999).

Aside from individual difference variables, the literature has devoted some attention to contextual factors that may impact employee participation in self-development activities. A number of studies have investigated the role of perceived support from management and engagement in self-development activities (e.g., Birdi, Allan & Warr, 1997; Maurer & Tarulli, 1994). These studies demonstrate the role of organizational leadership in promoting self-development among employees. This relationship, though, does not currently expand much beyond linking supportive management to participation in developmental activities and does not look at the influence of specific leader behaviors on leader self-development. Therefore, this research extends the current research by testing the specific role that leaders play in influencing employee choice regarding leader self-development activities.

Leader Modeling Behaviors

Modeling is a component of Social Learning (or Social Cognitive) Theory (Bandura, 1977; 1986) and states that individuals can learn simply through observing behaviors and the consequences of those behaviors. By doing so, standards of behavior are learned, and used to guide subsequent behavior by observers. Given that the personalized learning that characterizes leader self-development has been demonstrated to be most effective when it comes to adult learning (Knowles, 1975), connections can be

drawn to Social Cognitive Theory, one of the traditional theories of adult learning (Merriam & Caffarella, 1999).

In order for learning through observation to take place, the observers must pay attention to the model, retain information about the behavior that was modeled, produce similar behaviors to that of the modeled behavior, and recognize the positive consequences associated with that behavior (Bandura, 1977; 1986). By observing others, employees learn how to behave, and the example behaviors that leaders within an organization engage in often serve as the behavioral standard for employees (Davis & Luthans, 1980). Leaders themselves are also impacted by behavioral models. Latham and Saari (1979) empirically demonstrated that supervisors can effectively be trained through modeling techniques on such behaviors as motivating poor performers and overcoming resistance to change among employees.

These studies indicate that a powerful and viable option for developing leaders within organizations is through behavioral models. In the case of leader self-development, employees who are surrounded by leaders who engage in self-development activities themselves will be more likely to also partake in leader self-development activities as compared to those employees that have no external example of self-development to follow. By observing leaders who engage in leader self-development activities, employees should begin to view self-development as one of the main options for the development of their own leadership skills, and if observed often enough, may even become the norm in the organization for how leader development should occur. Therefore, the next hypothesis surrounds the relationship between leader modeling

behaviors and engagement in leader self-development activities. Given that no data can be obtained on the quality of an individual's leader's self-development activities, no specific hypotheses are made regarding those attributes.

Hypothesis 3: Individuals whose leaders model engagement in leader self-development activities are more likely to engage in a higher quantity of leader self-development activities compared to individuals whose leaders do not model these types of behaviors.

Self-Identities

In any setting, performance is partially a function of motivation (Campbell, 1990). Understanding the motivation of self-developers helps to explain whether employees engage in leader self-development, and also should impact the quality of the self-development activities. In this dissertation, motivation is examined through self-identity (or self-schemas).

Identity Theories and Goals. Self-concepts are partially composed of identities (Lord & Brown, 2001). According to Stryker's (1980, as cited in Shamir, House, & Arthur, 1993) identity theory, people have various identities within their self-concept that are arranged according to a hierarchy of salience, indicating that some identities are more accessible than others. The identity at the apex of the hierarchy is the most salient and provides behavioral direction. Research has found that people with a strong self-focus were more likely to seek out activities where they could demonstrate proficiency in that particular domain (Markus, Cross, & Wurf, 1990) and also to seek out information that provided knowledge of their performance level (Carver & Scheier, 1982). Therefore,

individuals with a strong leader self-identity are more likely to engage in leader self-development activities than those individuals who do not see themselves as a leader.

Importance of Identity to Leader Self-Development. Individuals who are not schematic in the leadership domain will see little need to engage in self-development activities to improve leadership skills. A salient self-identity as a leader can be maintained by engaging in learning and development relevant to that identity.

There is little empirical evidence to-date that explicates the relationship between leader self-identity and leader self-development, but there are two studies that provide support for a more generic relationship. Maurer and Tarulli (1994) found that individual values interacted with other variables to predict engagement in self-development. This relationship indicates that people engage in self-development to develop skill-sets that they value. If being a leader is valued (as indicated by a high leader self-identity), then participation in leader self-development activities is more likely to occur. Second, a recent dissertation (Hiller, 2005) empirically demonstrated the relationship between leader self-identity and leader development. Hiller found evidence that a strong leader self-identity is related to interest in participating in future leader development activities. This current study goes beyond Hiller's finding by not only examining actual engagement in leader self-development activities, but also how leader self-identity impacts the quality of these activities.

An examination of the general self-identity literature helps determine relationships between leader self-identity and leader self-development attributes. First, a strong self-identity in one domain facilitates retrieval of domain-related information

(Markus, 1977), and also leads to more refined, complex thinking about a given domain (Fiske, 1992). Hence, a strong leader self-identity should correspond to a more thorough understanding of what leadership involves and should facilitate engagement in content relevant leader self-development activities.

Second, when individuals possess a well-defined self-identity in a particular domain, they are likely to demonstrate persistence on activities in that domain (Markus, 1977) and pay more attention to activities that facilitate development in that domain. Therefore, individuals with a strong leader self-identity are likely to choose leader self-development activities that require high levels of learner engagement given that they are accustomed to putting forth effort to maintain their strong leader identity.

Finally, it is hypothesized that a strong leader self-identity should impact the level of challenge individuals choose in their leader self-development activities. Past research has shown that individuals with a strong self-identity in one domain are self-efficacious and feel high self-esteem about succeeding in that domain (Cross & Markus, 1994; Hiller, 2005). Research has also shown that aschematic individuals fail to persist in difficult situations within that domain (Phillips, 1984). This research indicates that individuals with a strong leader self-identity will choose more challenging leader self-development activities, given their confidence for success in such an environment.

Hypothesis 4: A strong leader self-identity is positively related to the quantity of leader self-development activities.

Hypothesis 5: A strong leader self-identity increases the a) content relevancy, b) learner engagement, and c) challenge of leader self-development activities.

Self-Development Skills: Self-Appraisal and Self-Regulation

One's ability to skillfully conduct leader self-development also influences one's willingness to engage in such activities (Boyce, 2004). This dissertation examines two individual attributes related to this ability – self-appraisal skills and self-regulation skills.

Self-Awareness and Self-Development

Self-awareness is “a measure of the person's ability to be truly conscious of the components of the self and to observe it accurately and objectively” (Hall, 2004, p. 154). The development of self-awareness has been highlighted several times in the leader development arena as one of the keys to engaging in effective development (cf., London, 2002).

Individuals who are aware of their current strengths and weaknesses are more likely to make choices regarding their leader self-development activities that are beneficial to leader development. First, by being more self-aware of themselves and the skills that are needed to be effective in the surrounding environment, individuals with strong self-appraisal skills possess the necessary knowledge to participate in leader self-development activities that are more content relevant. The more insight individuals have into themselves, the more likely it is that a need for development will be perceived (Maurer & Tarulli, 1994), and the more likely it is that individuals can discern the content areas in need of development. Stronger self-appraisal skills facilitate understanding in terms of the skills necessary for success, leading to a selection of self-development activities that target various areas of leadership.

Strong self-appraisal skills can also impact learner engagement during leader self-development activities. The more accurate individuals are in their self-appraisal, the more likely it is that they will note discrepancies between their current leader capacity and their desired leader capacity. This discrepancy may result in a sense of dissatisfaction with the self (Kanfer & Ackerman, 1989) which is likely to result in more effortful performance to reach the intended leader capacity (Bandura, 1977; Bandura & Locke, 2003).

Finally, self-appraisal skills should impact the experiential variety of leader self-development activities. The self-appraisal process involves reflection on past performances and events (Halpern, 2004). Through cycles of action and reflection, individuals engage in developmental tasks, reflect on the tasks and how they can be improved, and then circle back to developmental action. The process of reflecting on skills gained and the activities used for development provides individuals with a greater depth of perspective on their current skills (Halpern, 2004) and is likely to lead to recognition of new components contained within one skill. This recognition should facilitate engagement in *different* activities in subsequent action phases to mirror the new perspective on the skill being developed.

Self-Regulation and Self-Development

Self-regulation is the mechanism by which individuals direct their goals over time by modifying thoughts, affect and behavior in comparison with some set standard (Carver & Scheier, 1982; Porath & Bateman, 2006). Self-regulatory behaviors allow people to align current and future behavior by providing an evaluative backdrop for a specific goal (Latham & Locke, 1991). Following this evaluation against a set standard, another

critical component of self-regulation is self-reaction (Kanfer & Ackerman, 1989). Here, individuals become satisfied or dissatisfied with their current behaviors or skills and also make self-efficacy judgments regarding their capabilities to reach their behavioral standard. These reactions influence both goal choice and goal striving (Chen, Thomas, & Wallace, 2005). Goal choice dictates the direction that effort is spent, whereas goal striving sustains that effort through goal accomplishment. Through the self-regulatory processes of evaluation, reaction and goal-setting, the choices one makes about the attributes of his or her leader self-development activities should be influenced. Even though this research does not examine each of these processes separately, they all should contribute to an individual's overall skill in self-regulation.

First, skill in self-regulation processes should influence the content relevancy of the activities. The process of evaluating one's current state against a future state implies some level of knowledge regarding one's strengths and weaknesses and the domain in which one is setting goals. Orvis (2007) empirically demonstrated a significant relationship between the self-regulatory process of self-evaluation accuracy and content relevancy. The goal setting component of self-regulation should also influence content relevancy. High self-regulators are able to direct behavior towards goals and away from goal irrelevant behavior (Latham & Locke, 1991). In the current study, engaging in content relevant leader self-development activities indicates that individuals have a clear understanding of what effective leaders do and possess the self-regulatory skills to engage in an appropriate goal striving process.

Self-regulation skills should also influence the learner engagement attribute of leader self-development. High self-regulation skills move a person to action and dictate the degree to which they demonstrate persistence and effort in those actions (Bandura, 1977; Schunk, 1981). This persistence and effort is partially impacted by the self-efficacy judgments made by individuals as part of the reaction self-regulatory process (Bandura, 1977). In fact, Orvis (2007) demonstrated that self-efficacy for self-development activities positively impacted learner engagement. Therefore, individuals high in self-regulation should make choices during self-development activities that positively impact the effort put into that activity, resulting in higher levels of learner engagement.

Finally, self-regulation skills may impact the degree of challenge one chooses to include in leader self-development activities. Self-regulation processes do not just operate in a reactive manner as described above, but also enable a proactive process within individuals that causes them to be motivated by their goals (Bandura, 1991). This motivation may cause individuals to set challenging goals (Bandura & Cervone, 1986). If an individual has indeed chosen a difficult goal, the course of action to reach that goal will be more intense so as to actually accomplish the difficult goal (Latham & Locke, 1991). In other words, difficult goals demand engagement in challenging activities to accomplish that goal. As with learner engagement, the self-efficacy judgments made during self-regulatory processes should also impact the challenge in the leader self-development activities, as self-efficacious individuals feel more comfortable succeeding in challenging activities (Bandura, 1977). Based on the above discussion, several hypotheses are proposed.

Hypothesis 6: a) Self-appraisal skills and b) self-regulation skills positively impact the quantity of leader self-development activities.

Hypothesis 7: Self-appraisal skills have a positive relationship with the quality dimensions of a) content relevancy, b) learner engagement, and c) experiential variety.

Hypothesis 8: Self-regulation skills have a positive relationship with the quality dimensions of a) content relevancy, b) learner engagement, and c) challenge.

Study 1 Method

Participants

Multi-level Marketing

The participants for this study were all recruited from a multi-level marketing organization (MLM). Prototypical examples of such organizations are Amway or Mary Kay. Within these organizations, all of the consultants are independent and considered self-employed. Promotion in this type of organization typically is given to people who have a high volume of sales and sponsor many people to also work for the organization, and, therefore, a hierarchy of rank and leadership is evident. The main reason that this organization was chosen to be the target of study is because of its strong emphasis on self-development as a main form of leader development. Engaging in effective leader self-development helps the consultants succeed in their leadership roles, roles for which they may not have had formal training.

The Current Participants. The name of the organization from which participants were recruited for this study is anonymous, and henceforth will simply be referred to as “the organization.” Within the organization, the hierarchical rank is such that one moves up by starting as an independent consultant, moving up to a District Manager (DM) position, and then to Area Manager (AM); finally there is a promotion to regional vice president (RVP) to be followed by a promotion to national vice president (NVP).

For this study, 241 consultants responded to the survey (30% consultants, 36% DMs, 20% AMs, 9% RVPs, 6% NVPs). The large majority (97%) of the sample was female (as is the tradition within this organization), and the ages of the participants ranged from 18-67 ($M = 40.84$, $SD = 10.04$). The participants tenure with the organization ranged from 1 week to 15 years ($M = 20.64$ months, $SD = 20.98$).

Participants were recruited by making contact with consultants whose contact information was on the organization's website. Emails sent to each identified consultant informed her of the study and encouraged her to share this information with her network.

Measures

The majority of the measures used in this study are measures that have been validated in past research. However, because the focus organization is not a traditional, hierarchical organization, some of the items needed to be adapted to fit with the organizational structure. All measures are found in Appendix C.

Contextual Variables

Leader Modeling. In order to assess the modeling behaviors of one's external leader in regard to leader self-development activities, a scale was created specifically for this study. The measure consisted of four items, such as "My leader is continually working to improve his or her own leadership skills," and "I often attend leader training sessions that my team leader is or has attended." Participants responded to this measure on a 7-point scale (1 = Strongly Disagree to 7 = Strongly Agree). The internal consistency for this measure was sufficient ($\alpha = .80$).

Individual Difference Variables

Leader self-identity. In order to assess the strength of one's leader self-identity, a measure developed by Hiller (2005) was used. This measure directly asks participants the extent to which they see themselves as a leader. Based on the literature, there are three different aspects of a self-view or self-identity: descriptiveness (is the self-identity very descriptive of the self?), importance (is the self-identity very important to the self?), and certainty (is the person very certain about this aspect of his/her self-identity?). The measure for leader self-identity is composed of four different items that must each be answered in regard to the three different self-identity aspects. For the descriptiveness aspect, the stem asks the participants to rate the extent to which the items *describe* him/her (1 = not at all descriptive to 7 = extremely descriptive). For the importance aspect, the stem asks the participants to rate the extent to which the items are *important* to him or her (1 = not at all important to 7 = extremely important). Finally, the certainty aspect asks the participants to rate the extent to which he or she is *certain* about the statements (1 = not at all certain to 7 = extremely certain). The internal consistency for this measure was good ($\alpha = .94$).

Self-Development Skills. Self-appraisal skills were assessed by a measure developed by Cortina, et al. (2004). This measure contains 10 items assessing how well and how often individuals analyze their needs. These items were measured on a 7-point scale (1 = Strongly disagree to 7 = Strongly agree), and the reliability was acceptable ($\alpha = .73$).

Meta-cognitive self-regulatory skills were assessed through a subset of the Motivated Strategies for Learning Questionnaire (MSLQ) scale developed by Pintrich,

Smith, Garcia, & McKeachie (1993). This measure has 12 items that assess three dimensions: planning, monitoring, and regulating ($\alpha = .77$). This measure was completed by the individual participants and answered on a 7-point scale (1 = Strongly Disagree to 7 = Strongly Agree).

Outcome Variables

Effective leader self-development participation. Participants responded to an open-ended questionnaire (adapted from Orvis, 2007), where they were first asked to list all of the leader self-development activities in which they participated during the last month, and then were asked to provide a detailed description regarding one of these self-development activities. Each of the quality attributes was measured through content coding of these open-ended responses that was conducted by researchers not affiliated with the study or the organization². Along with coding for content relevancy, learner engagement, learner control and the experiential variety of the self-development activities, the pure quantity of activities within the last month was also coded along with self-development choice, indicating whether an individual engaged in *any* leader self-development activities. Finally, descriptions were coded for an attribute entitled scope and scale; this attribute rated the described leader self-development activities on the degree to which they focused on the training and development of others versus a focus on the self-developer improving his or her own skills.

The coding scheme used was adapted from Orvis (2007). To obtain a rating for content relevancy, the coders rated how large of a focus 13 leader behaviors (Fleishman

² These attributes (with the exception of experiential variety) were also assessed with self-report measures. However, due to inherent biases in self-report measures, the content coding is the main focus.

et al, 1991) were in the leader self-development activities described by the participants. Each behavior was rated on a 1 to 5 scale and then aggregated for a possible total of 65.

The rating scales for challenge, learner control, and scope and scale ranged from 1 to 5, with a 5 indicating a higher level of that attribute in all cases. For the challenge rating, coders sought out information in the descriptions that indicated whether the activity was difficult for the self-developer. For example, activities that exposed the participants to novel information or required a demonstration of the skills being developed were rated as more challenging. To provide a rating for learner control, coders examined the descriptions for information that indicated the degree of explicit guidance provided to the self-developers during the activity and how much flexibility the self-developer had in terms of altering the content, pacing, or sequencing of the activity. The scope and scale rating was based on how much the activity focused on changing others versus changing the self. For example, an activity where a participant organized a training event for subordinates was rated higher in scope and scale than a leader self-development activity where a participant attended a seminar on time management.

Finally, the learner engagement scale ranged from 1 to 10, given that each of its subcomponents (practice and progress evaluation information) were rated on a separate 1 to 5 scale and then aggregated. To rate the practice attribute, coders looked for various forms of practice that were part of the self-development activity, including engaging in discussion or a role-play. To obtain a rating for progress evaluation information, the coders rated the degree to which self-developers received feedback during the activity.

The ratings for experiential variety and quantity were not capped and were based on a list of all the leader self-development activities that one individual engaged in during the last month.

There were a total of 6 coders who were all upper-level graduate students in Industrial/Organizational psychology. In order to facilitate a shared mental model surrounding the coding scheme, all coders were extensively trained by rating and discussing practice responses. Following the practice responses, coders were given participant responses to code separately, and then met as a group and used a consensus process to obtain the true ratings. An estimate of interrater agreement was obtained by calculating the percent agreement between all six raters on responses from eight different participants. The overall percent agreement across all dimensions is 82.5%. This percent is similar when broken down across attributes: content relevancy – 81.3%; learner engagement – 81.3%; challenge – 83.3%; learner control – 83.3%; experiential variety – 91.7%; scope and scale – 89.2%; quantity – 85.4%. Following obtainment of these sufficient levels, consensus was no longer done in the full group, but instead within pairs of coders.

Adaptive performance. Adaptive performance was measured with a scenario-based measure developed for this study. The presented scenario describes a situation and asks participants to describe what they would do to deal with the situation. To assess whether participants could perform adaptively, participants were told that the situation that they initially encountered changed, and participants were instructed to offer a response to this change scenario. The participant responses were assessed on a 5-point

scale to the degree that they 1) offered a functional strategic response to the first part of the scenario and 2) integrated information from both parts of the scenario in their response to the subsequent change. The aggregate score from these two ratings was used as a measure of adaptive performance. Adaptive performance means being able to maintain high performance even when operating circumstances change; this composite index of the two ratings indicates how well each participant performed across a changing scenario. Similar to the coding for the attributes associated with leader self-development activities, a total of 6 coders were extensively trained through a series of practice scenarios. After training was deemed sufficient, all raters independently coded responses from three different participants, and interrater agreement was calculated to be 81.5%.

Team performance. Performance was measured based on the sales volume of their direct team members during the past month. Because it is not possible to obtain this number from company records, a biodata item was used. Biodata items focus on past behavior and events and are typically objectively verifiable. Therefore, in this particular context, since the consultants' monthly volumes are potentially verifiable through their NVP, it is thought that inflation is not a substantial concern (e.g., Mitchell, 1994).

Procedure

All measures were collected through an online survey that participants were asked to complete within two weeks. A reminder email with the survey link was sent to those who did not yet complete the survey after one week of the initial distribution and again at the two week point.

Study 1 Results

Descriptive Statistics

The means, standard deviations, and correlations for the data are found in Table A2 in Appendix A.

Tests of Hypotheses

Predicting Adaptive Performance

It was hypothesized that challenge (Hypothesis 1a) and experiential variety (Hypothesis 1b) were significantly related to an individual's adaptive performance. Based on an examination of the correlation matrix, experiential variety is a significant, positive predictor of adaptive performance ($r = .21, p < .05$) but challenge is not significantly related ($r = .04, n. s.$). A hierarchical multiple regression analysis (Table A3) that contained all five of the attributes of high quality leader self-development activities as predictors demonstrated that both experiential variety ($\beta = .18, p < .05$) and learner control ($\beta = .21, p < .05$) explain unique variance in the prediction of adaptive performance beyond the variance of the other attributes ($\Delta R^2 = .07, p < .05$). These relationships indicate that self-development efforts that provide experiential variety and allow for learner control contribute positively to one's ability to adaptively perform.

The relationships between adaptive performance and self-appraisal skills ($r = .21, p < .01$) and self-regulation skills ($r = .18, p < .05$) were also observed to be significant.

When entered into a multiple regression equation (Table A4), the overall equation is significant ($R^2 = .05, p < .05$), however, neither of the individual predictors are significant. These analyses illustrate that as a set, self-appraisal and self-regulation skills are important to the prediction of adaptive performance, however, neither of these skills can explain unique variance in adaptive performance over the other.

Predicting Team Performance

Hypothesis 2 predicted that the five attributes of high quality leader self-development activities would positively impact team performance. As can be seen in the correlation matrix, the only attribute that had a significant relationship with team performance is experiential variety ($r = .21, p < .05$). A multiple regression analysis (Table A5) with the five attributes of quality as predictors showed that experiential variety possesses unique predictive power beyond the prediction of the other attributes ($\beta = .27, sR^2 = .07, p < .01$). Upon further exploration, an interaction approaching significance ($\Delta R^2 = .03, p = .06$) between experiential variety and challenge was also found to contribute toward the prediction of team performance. The results of this moderated regression are found in Table A6. A graph depicting the nature of this interaction is seen in Figure 1B in Appendix B. As demonstrated in the figure, the highest team performance is reported by those individuals whose leader self-development activities provided both experiential variety and high challenge. At low levels of experiential variety, increasing levels of challenge do not have an impact on team performance. This interaction indicates that both challenge and experiential variety in a leader's self-development are necessary impact that leader's team performance.

As observed in the correlation matrix, there is a positive, significant relationship between self-appraisal skills and his or her team's performance ($r = .19, p < .05$). This skill-set is emerging as very important to leader effectiveness as demonstrated by this relationship and the significant relationship with adaptive performance described above.

The relationships between motivational predictors (i.e., leader modeling behaviors and leader self-identity) and team performance were also explored. A multiple regression analysis (Table A7) demonstrated unique prediction of a leader's team performance by his or her own leader's modeled self-development behaviors ($\beta = .18, p < .05$) as well as the strength of his or her own leader self-identity ($\beta = .24, p < .01$), with the variables together explaining 11% of the variance in team performance ($R^2 = .11, p < .01$). This latter relationship indicates that leader effectiveness is, in part, based on how much individuals perceive themselves as leaders; individuals who possess a strong leader self-identity strive to demonstrate proficiency in the leadership domain (Markus, et al, 1990). The relationship with leader modeling and team performance illustrates the importance of having a good leader model who exhibits interest in leader self-development activities.

In summary, these results demonstrate that engaging in leader self-development activities that possess certain attributes is important for the growth of one's leader capacity, as evidenced by significant relationships with both adaptive performance and team performance. Emerging as most important was experiential variety, which contributed to stronger adaptive and team performance. This attribute, along with the others, are explored further in the next section, when discussing results pertaining to the prediction of the quality attributes.

Predicting Attributes of High Quality Leader Self-Development

Leader Modeling Behaviors. Hypothesis 3 predicted that having a leader who models involvement in leader self-development activities is positively related to one's quantity of leader self-development activities; this hypothesis was not supported ($r = -.04$, *n. s.*). However, leader modeling is related to the experiential variety an individual chooses in his or her leader self-development activities ($r = .21$, $p < .05$). Thus, leaders were more likely to put a greater variety of developmental activities in their self-development curriculum when their own leader modeled self-development activities.

Leader Self-Identity. Hypotheses 4 and 5 concern leader self-identity and its relationship with leader self-development attributes. Neither of these hypotheses was supported. However, leader identity did influence the scope and scale of the leader self-development activities ($r = .20$, $p < .05$). Individuals who possess a strong leader self-identity were more likely to choose leader self-development activities that focus on the development of others instead of activities that directly focus on developing their own skill-sets. This relationship is consistent with theory put forth by Lord and Hall (2005) and is examined further in the discussion section.

Although the hypotheses regarding self-identity and leader modeling behaviors were not consistently supported, it is worth noting that these motivational predictors have a significant influence on leader self-development choice. Results of a logistic regression analysis (Table A8) showed that together, leader modeling and leader identity are significant predictors ($\chi^2 = 19.65$, $p < .01$, Nagelkerke $R^2 = .17$) of whether individuals engage in self-development activities. Leader self-identity emerged as a stronger

predictor ($B = .70$, $SE = 1.44$, $p < .01$), with an odds ratio of 2.01, indicating that for every one point increase in leader self-identity, an individual is two times more likely to engage in leader self-development activities than if he or she did not possess that level of self-identity. These results demonstrate the instrumentality of these variables in individuals taking the first step toward developing their leader capacities through engagement in leader self-development activities. Interactions between these motivational variables and individual skills are tested in the next section.

Self-appraisal and self-regulation skills. The remaining hypotheses concern the impact of self-regulation and self-appraisal skills on one's self-development activities. Hypothesis 6, which predicted a positive relationship between both skill-sets and the quantity of leader self-development activities, was not supported. However, results of a logistic regression (Table A9) demonstrate that both of these predictors impact leader self-development choice ($\chi^2 = 16.31$, $p < .001$, Nagelkerke $R^2 = .14$). Self-appraisal skills emerged as a stronger predictor ($B = 1.02$, $SE = .32$, $p < .01$), with an odds ratio of 2.78, indicating that for every one point increase in self-appraisal skills, the odds of an individual engaging in leader self-development activities increases by nearly three times.

Hypothesis 7 is concerned with the influence of self-appraisal skills on a) content relevancy, b) learner engagement, and c) experiential variety. The latter two parts of this hypothesis were supported, and upon further examination, the predictive power of self-appraisal skills is highlighted in the significant relationship it has with many of the attributes associated with effective leader self-development: learner engagement ($r = .20$, $p < .05$), experiential variety ($r = .21$, $p < .05$), challenge ($r = .20$, $p < .05$), and learner

control ($r = .19, p < .05$). It also has a significant relationship with scope and scale ($r = .18, p < .05$).

Hypothesis 8 is similar to the previous hypothesis in that it predicted positive relationships between self-regulation skills and a) content relevancy, b) learner engagement, and c) challenge. No parts of this hypothesis were supported, however.

Additional analyses were conducted involving self-appraisal and self-regulation skills. A significant interaction was found in the prediction of content relevancy between leader modeling and self-regulation skills ($\Delta R^2 = .07, p < .01$); also, an interaction that approached significance was found between leader modeling and self-appraisal skills ($\Delta R^2 = .04, p < .10$). The results of the moderated regression analyses are found in Tables A10 and A11, and the nature of both of the interactions is illustrated in Figures 2B and 3B. Both interactions display similar patterns, in that the highest levels of content relevancy in leader self-development activities was exhibited by individuals who displayed high levels of either self-appraisal or self-regulation skills and reported high levels of leader modeling behaviors.

Study 1 Discussion

This study attempted to demonstrate two main points regarding leader self-development activities: 1) leader self-development activities that possess certain attributes are related to important outcomes associated with leader effectiveness, and 2) the choices that individuals make regarding their self-development activities are influenced by the behaviors of their own leaders as well as by their own individual motivation and skills. These general themes were supported by the data, as both adaptive performance and team performance were predicted by attributes associated with high quality leader self-development activities. Also, external leader behaviors and individual skill-sets predicted leader self-development attributes.

Predicting Adaptive Performance

Results show that engagement in leader self-development activities that provide experiential variety and allow for high levels of learner control predict adaptive performance. Experiential variety contributes to adaptive performance by providing individuals with a variety of experiences that necessitate the creation of more complex frames; as individuals are exposed to various developmental experiences that provide information from differing perspectives, self-developers must learn to integrate all of this information, hence, expanding their frames of references. Given that there is now a

greater repertoire of experiences present in their frames of references to guide responses, these self-developers are now better equipped to succeed in changing situations.

Participation in leader self-development activities that require a high degree of learner control means that the self-developer dictates the pacing, sequencing, objectives, and content of the activity and must discern the best way to learn the material. In order to develop an appropriate developmental curriculum, these individuals must exert great regulatory processes and must also integrate and pull information from multiple sources, often times requiring more active participation. This type of active processing that should be present with a higher degree of learner control can lead to more flexible knowledge structures that are capable of being transferred to new situations (Frese & Zapf, 1994). Individuals who exert greater control over their own development are also more likely to meaningfully structure the information from tasks into their frames of reference. The development of a more complex knowledge structure is one of the keys to adaptive performance (Smith, et al, 1997).

The relationships with adaptive performance and both experiential variety and learner control support the idea of individuals developing *adaptive expertise* (Holyoak, 1991; Smith, et al., 1997) through leader self-development activities. Adaptive experts can transfer their skills to novel tasks and possess in-depth knowledge of one's skills. Smith et al. encourage "mindful learning" (p. 93) to develop adaptive expertise. Both experiential variety and learner control promote mindful learning during self-development activities given that both of these attributes require self-developers to integrate information from different sources. Through greater experiential variety and

higher levels of learner control, self-developers should develop detailed knowledge structures that allow a greater wealth and depth of information to be present and utilized in novel situations.

The hypothesis that the level of challenge in one's leader self-development activities would have a positive influence on adaptive performance was not supported. There are two components involved in rating a self-development activity as challenging: 1) an encounter with ideas or situations that are novel or different from the self-developer's own ideas; and 2) an application or demonstration of the skill(s) being developed. The first portion of this rating seems to be one of the keys to growing adaptive performance given that novel situations require individuals to adopt new perspectives and integrate this new perspective with information currently in their frame of reference. Although novelty was coded for as part of the challenge rating, only 15 participants (4%) received a higher challenge rating because of engagement in a novel situation, suggesting the challenge rating was only a function of application. However, if the participants were not applying what they were learning in a *different* domain, this application may not increase their adaptive performance. Future research should operationalize challenge more from the novelty perspective and create another method of obtaining this important information from self-developers.

Another significant predictor of adaptive performance is self-appraisal. Individuals with accurate self-appraisals understand their strengths and weaknesses partially by reflecting on how they perform within various situations; these individuals should be able to discern when their behavior is effective and when it is not. Being able

to recognize effective behavior should contribute to effective responses across a variety of situations. Self-appraisal skills may also have an indirect impact on adaptive performance; this skill-set positively predicts learner control and experiential variety. Therefore, self-appraisal may contribute to an increase in adaptive performance partially through an effect on these self-development attributes. In fact, the data in this study support such mediated relationships; results from these subsequent analyses are seen in Tables A12 and A13.

In general, these results demonstrate that leader self-development activities that require individuals to integrate and combine information from a variety of qualitatively different experiences are important for the growth of adaptive performance. These results are the first stepping stone in understanding how leader self-development activities can contribute to adaptive performance. These results contribute to the self-development literature by demonstrating that it is not engagement in self-development activities alone that facilitate a growth in adaptive performance, but instead, specific attributes of these activities must be examined to explicitly understand this relationship. As self-development emerges as a prominent form of leader development, future research should continue to refine this relationship.

Predicting Team Performance

In this dissertation team performance is operationalized as the sales volume of one's direct subordinates. This measure was viewed as one proxy for leader effectiveness, given that a subordinate's sales volume is related to the leader's focus on subordinates; a subordinate would not have a high sales volume if their leader is not effective at training

them and providing them with the appropriate information and methods needed to succeed. As with adaptive performance, experiential variety emerged as an important predictor of this performance variable. An interaction approaching significance was also found between experiential variety and challenge.

As illustrated above, experiential variety in leader self-development activities contributes to adaptive performance; in other words, experiential variety from self-development activities helps to expand one's frame of reference and ultimately, his or her leader capacity. A growth in leader capacity should be accompanied by an understanding of the processes and behaviors in which effective leaders engage, which should manifest itself in behavioral change. Therefore, a growth in one's team performance is one demonstration of this growth in leader capacity. Also, self-developers who engage in a gamut of leader self-development activities that provide experiential variety are learning to adopt new perspectives. This exposure may help them to understand the perspectives that their subordinates hold and make them better equipped to discern appropriate training and motivational methods for their subordinates, both of which should impact subordinate sales volume. In sum, activities that promote the development of new perspectives are useful for impacting team performance.

Also deserving mention here is the interaction found between experiential variety and challenge in the prediction of team performance. This interaction indicates that challenging activities are useful for enhancing leader effectiveness but only when the experiential variety of those activities is also high. Challenging activities require individuals to stretch beyond their current means (Van Velsor & McCauley, 2004). This

stretch alone will not translate into a growth in leader capacity, however. The real merit to engaging in challenging activities comes from being able to integrate and apply the new information gained from one activity to a different domain. This application across situations (which is facilitated by experiential variety of activities) allows individuals to gain a more complex understanding of leader processes.

As with adaptive performance, self-appraisal skills were a significant, positive predictor of team performance. Once again, it is thought that experiential variety may mediate this relationship between self-appraisal skills and team performance. The data from this current study show support for this mediated relationship, and illustrate that self-appraisal skills impact team performance through an increase in experiential variety. The results of this mediated regression are seen in Table A14.

Prediction of Leader Self-Development Attributes

The main theme that emerged out of the analyses surrounding the prediction of attributes associated with high quality leader self-development activities is that motivational variables are instrumental in self-developers initiating engagement in leader self-development activities, but skills are essential in predicting the choices that self-developers make regarding the attributes of these activities. Significant motivation by skill interactions were also found to predict the self-development attributes.

Both leader modeling behaviors and leader self-identity positively predict leader self-development choice (i.e., whether individuals choose to engage in self-development activities). Although hypotheses were made regarding these motivational variables and the quality of leader self-development activities, many of these relationships were not

supported. The only significant direct effects found were in terms of leader modeling behaviors influencing the experiential variety provided by leader self-development activities and leader identity influencing the scope and scale of one's activities. This relationship between leader self-identity and scope and scale is consistent with Lord and Hall's (2005) leader identity theory which suggests that as leaders develop their expertise, their identities become inextricably linked with the identities of their followers. Expert leaders better understand the developmental needs of his or her followers because of this identity link. Therefore, individuals who possess a strong leader self-identity are more likely to choose self-development activities that help them develop the skills necessary to develop their followers into leaders as well.

In contrast to the motivational variables, self-appraisal skills were a significant predictor of all of the attributes associated with high quality leader self-development activities, except content relevancy. These significant relationships indicate that when individuals possess accurate views of their strengths and weaknesses, they may be more capable of engaging in leader self-development activities that are more fruitful for development occurring. In other words, the quality of leader self-development activities is higher when individuals understand that they have weaknesses to develop and will work harder to turn these weaknesses into strengths.

In terms of predicting content relevancy, several interesting interactions were found between self-appraisal and self-regulation skills and leader modeling behaviors. These relationships indicate that individuals target activities relevant to the development of leadership skills when they possess both the skills to do so and leaders who model

appropriate leader self-development activities. These interactions are consistent with Social Cognitive Theory and Bandura's (1986) work, which states that underlying skills aid in information extraction from behavioral models. The presence of self-regulation and self-appraisal skills makes it more likely that individuals will produce new behaviors upon observing behavioral models. Future research should examine other potential moderators that may influence the relationship between leader modeling behaviors and self-development attributes. For example, Bandura's work (2006) speaks to social connectedness as a facilitator of new behavioral patterns through modeling. Leaders should encourage communication about leader self-development activities among various networks of individuals to help facilitate a deeper understanding about those activities.

The demonstrated interactions are important as they represent the interplay of the individual with the surrounding environment. Individuals may possess the skills necessary to grow their leader capacities through self-development activities, but if the organizational environment does not support and provide guidance to such activities, the self-development may not be as effective. Given the significant, positive relationships found between high quality self-development and both adaptive and team performance, it is in an organization's best interest to encourage leader self-development at all levels of the organization.

In summary, engagement in high quality leader self-development activities must begin with a motivation to even engage in leader self-development activities to any extent; if no self-development is conducted, it does not matter whether these activities are of high quality. External leader behaviors can provide the motivation for employees to

see self-development as a viable option for growing their leadership skills. In order for individuals to make effective choices regarding the attributes that their self-development activities possess, self-developers must have the skills necessary to do so. Specifically, this dissertation examined the impact of self-appraisal and self-regulation skills and found that both of these are important predictors of high quality leader self-development activities.

It is proposed that organizational leaders can be trained to engage in self-development themselves to provide a positive role model for subordinates. But how can organizations develop relevant skills within their employees to impact the choices made regarding leader self-development activities? As demonstrated in this study, engagement in self-development activities that possess certain attributes (particularly experiential variety and learner control) has implications for outcomes associated with effective leadership. Therefore, Study 2 explores how individuals can be trained to make more effective choices regarding their leader self-development activities.

Study 2

Leader Self-Development Skills Training

As discussed and demonstrated in Study 1, engagement in effective leader self-development activities is partially a function of one's ability to choose the most valuable activities. Self-development is a unique way of developing one's leader capacity because individuals have choices regarding the activities in which they participate and the quality of those activities; individuals need to understand this aspect of self-development in order to grow their leader capacity. In other words, when it comes to effectively conducting leader self-development activities, self-developers need to "learn to learn."

The purpose of this study is to expand upon the findings demonstrated in Study 1; the training designed and examined here generally focuses on helping individuals understand where their strengths and weaknesses lay and how goals can be effectively set to improve upon weaknesses. This training also expands upon the findings in Study 1 by emphasizing the importance of gaining new perspectives through leader self-development activities. Given the inherent responsibility that self-developers must assume concerning the focus, method and evaluation of their own development, this training is intended to help individuals to be more effective in the choices made regarding their leader self-development activities.

The foci of this training are aligned with elements of individual development put forth by McCauley and Hezlett (2002). They present the following as being elemental to the occurrence of any type of individual development: 1) self-efficacy for learning, 2) new experiences, 3) awareness of developmental needs, and 4) examination of the self in terms of experiences. The training described in this study should increase self-efficacy through an increase in self-regulation processes, highlights the importance of new experiences and developing new perspectives, and also requires self-developers to be aware of their developmental needs by examining themselves and their experiences. Therefore, this training targets the fundamental elements necessary for individual development. The result of this training should be self-developers who are more confident in their ability to engage in self-development effectively, and hence, become more active producers of their own leader development.

This training teaches individuals a process to help them target specific leadership skills in need of development during leader self-development activities. This process-approach focuses on how to maintain and generalize learning (Gist, Bavetta, & Stevens, 1990), and not on the development of any one specific skill-set. Taken as one, the training fosters a different, more complex way of thinking within individuals that builds a more sophisticated model of the self. This complexity is necessary for individuals to fully grasp all of the pieces involved in effective leader self-development activity.

Training Components

The training program focuses on helping individuals develop awareness of their strengths and weaknesses and also on setting goals to overcome the latter. Learning

contracts are included in the training. Learning or behavioral contracts are agreements about the goals that individuals have and also state the detailed steps that the individual is going to take to reach that goal in a specified amount of time. These tools are beneficial because they allow learners to have more control over their actual learning (Ellinger, 2004), an especially important aspect in self-development when individuals are responsible for their own progress. Therefore, part of the training in this research focuses on guiding individuals through the creation of a learning contract.

This training also emphasizes the importance of gaining new perspectives through self-development activities by encouraging individuals to engage in multiple methods to reach one leader self-development goal. Such training should help individuals gain a greater understanding of themselves and of the skills that are in need of development, hence increasing their conceptual capacity and helping to ensure higher quality development in terms of leadership.

Given this content focus, the training program has the potential to impact several of the self-development attributes. First, it is hypothesized that participation in this training program enhances the quantity of leader self-development activities among participants. Because participants are provided with opportunities to think about and set leader development goals for themselves, engaging in self-development to reach these goals should be more salient.

Hypothesis 1: Individuals who receive training in self-development skills engage in a greater quantity of leader self-development activities than those who do not receive the training.

In terms of the quality attributes, if individuals are more aware of and know how to appropriately strive toward goals, the content relevancy of their self-development activities should reflect this awareness and knowledge. Also, individuals who recognize that they have weaknesses should be more motivated to improve upon those weaknesses, hence influencing learner engagement. Third, as individuals become more aware of themselves and learn to reflect on their actions and behaviors, they should also become more aware of the congruence between their self-development activities and their developmental goals. They may be more inclined to try many different activities upon realizing that one type of activity may be insufficient to completely develop the target skill. Experiential variety in leader self-development activities should also be facilitated by training that focuses on the development of new perspectives. Finally, individuals who receive this training should set more challenging goals, and hence choose activities that have a level of challenge to mirror those goals.

Hypothesis 2: Individuals who receive self-development skills training exhibit greater a) content relevancy, b) learner engagement, c) experiential variety, and d) challenge in their subsequent self-development activities.

Study 2 Method

Participants

The same participants who completed the survey in Study 1 were utilized in this study. In this study, the participants were given the self-development skills training and were surveyed one more time (time 2)³. Time 2 (T2) consisted for data from 150 participants (a 62% response rate from Time 1), that were all female. The break-down in terms of organizational position was similar to that from Study 1 (20% consultants, 44% DMs, 21% AMs, 9% RVPs, 6% NVPs).

Design

This study was a between-subjects design, in which participants were randomly assigned to either a control condition or a training condition⁴. Based on the discussion presented above, it can be seen that there are several individual difference skill variables (i.e. self-appraisal skills, self-regulation) that should influence the leader self-development activities in which one engages; the training tools presented to the participants can potentially influence these variables to some degree. The participants ($n = 59$) in the training condition received training that introduced them to self-appraisal and

³ An attempt was made to follow-up with participants for a third measurement period, however, by that time point, self-selection was a serious concern and there was also evidence of fatigue among the participants based on their survey answers. Therefore, because this population did not appear the same as those surveyed in Times 1 and 2, a decision was made to not utilize these data.

⁴ Some participants ($n = 28$) also participated in another training variant. Due to low power to test for difference, this training condition was eliminated from the analyses. More information concerning this condition is available from the author.

self-regulation/goal-setting, as well as training in the importance of forming new perspectives along with the training that pertained to those general self-development skills. Those participants who are part of the control condition ($n = 63$) did not receive any training tools. Measures of these skills from Study 1 were considered a pre-training administration, and the measures collected at Time 2 represented the post-training measurement used to determine if the training had an impact on these skills and the attributes associated with high quality leader self-development activities. These measures and the training tools are described in more detail below.

Self-Development Skills. Self-appraisal skills were assessed by the same means as in Study 1 (Cortina, et al., 2004). The reliability of this measure also held up across measurement periods (T2 $\alpha = .72$).

As in Study 1, meta-cognitive self-regulatory skills were assessed through a subset of the Motivated Strategies for Learning Questionnaire (MSLQ) scale developed by Pintrich, et al (1993). The reliability of this measure also held up across measurement periods (T2 $\alpha = .80$).

Training Manipulation

As stated, training tools were given to participants as a way to manipulate the types of skills that will be useful in engaging in effective leader self-development activities. These tools stressed the importance of self-awareness, self-regulation, and the development of new perspectives when engaging in effective leader self-development activities. This training also provided participants with the opportunity to specify goals in terms of their leadership skills, and create a learning contract based on these goals.

Within the learning contract, the participants were instructed to think of at least three different ways that they can use to accomplish the same learning objective and to reflect upon the unique skills and information that can be obtained from each differing activity.

There were several methods of training administration. Out of the participants who completed the training, 18 went through the training material on their own, either by viewing the materials from a website or by receiving the training materials in the mail; these participants were instructed to contact the researcher with any questions. Twenty-seven participants received the training materials through an in-person training session conducted by the researcher. Finally, 14 participants received the training by participating in a “webinar” (an online seminar) also conducted by the researcher. All participants returned the learning contract within two weeks of receiving the training materials.

Outcome Variables

Effective leader self-development participation. In Study 2, the same coding scheme and rating process as in Time 1 was used to assess the quality of leader self-development activities. The same trained coders were used for the open-ended response method and the same consensus process of ratings was utilized.

Adaptive performance. As in Study 1, adaptive performance was measured with a scenario-based measure developed for this study. A different scenario from Time 1 was utilized at Time 2, and as in Study 1, participants were asked to describe what they would do to deal with the presented situation. The same rating scale as in Study 1 was used, as well as the same method of assessing adaptive performance.

Team performance. As in Study 1, team performance was assessed based on sales volume with the same verifiable, self-report item.

Procedure

This study began about two weeks after the measurement period that occurred in Study 1. Self-development training was provided to the participants randomly assigned to the training condition. The remaining participants comprised the control condition, and therefore, received no guidelines. The participants were assigned to the different conditions based on the order that they submitted their responses to the initial questionnaires (i.e., the first person to respond was in the training condition, second person in the control condition). The participants were given approximately two weeks to study and look through the guidelines, with a reminder email sent at the half-way point.

Two weeks after the training tools were presented, the participants were instructed to return their completed learning contract to the researchers. Approximately two weeks after that, all of the participants (including those in the control condition) were emailed with a link to an online survey that contained the measures described above (Time 2 Measurement). The participants were given two weeks to complete these measures.

Study 2 Results

Analyses indicated no differences on the dependent variables based on the type of training method (i.e., webinars, web-based and in-person).

The first hypothesis in this study proposed that the training would have a positive impact on the quantity of leader self-development activities. After controlling for the quantity of activities at Time 1, this relationship was not significant. Results demonstrate, however, that the training impacted participant choice regarding leader self-development activities at Time 2. Results of a logistic regression analysis yielded a significant interaction ($B = 1.28, p < .05$) between training condition and whether individuals engaged in leader self-development at Time 1. This interaction demonstrates that those individuals who did *not* engage in leader self-development activities at Time 1 were more likely to report engaging in leader self-development activities at Time 2 *if they received the training*. These results indicate that merely educating individuals on leader self-development and having them create learning contracts is important to whether or not they engage in any self-development at all. The results of this analysis as well as a graph depicting the nature of the interaction are found in Table A15 and Figure 4B.

After controlling for the variables at Time 1, results of a hierarchical regression indicated that training condition significantly predicted three of the attributes associated with high quality leader self-development activities (and supported several parts of

Hypothesis 2): challenge, learner engagement, and learner control. In predicting challenge, the mean for the control group ($M = 1.77$) was significantly smaller than the mean of the participants who were trained ($M = 2.74, t = 2.23, p < .05$). A similar pattern can be found in predicting learner engagement; the mean for the control group ($M = 1.77$) was significantly less than the mean of the participants in the training group ($M = 2.71, t = 2.49, p < .05$). Finally, the results surrounding learner control are similar as well, with the mean of the control group ($M = 2.46$) significantly differing from the mean of the training group ($M = 3.12, t = 2.45, p < .05$). The results for the regression analyses are found in Table A16 in Appendix A. Contrary to the hypotheses, there was no significant effect of the training on content relevancy or experiential variety.

Finally, the impact of training on self-regulation and self-appraisal skills, as well as on adaptive and team performance was tested. Hierarchical regression analyses show no support for training influencing any of these variables. The results of these analyses can be seen in Table A17.

Study 2 Discussion

The training provided in Study 2 was designed to influence the choices that individuals make regarding their leader self-development activities by providing them with information about 1) how to accurately discern skills in need of development, and 2) how to effectively set and follow through on goals to develop those skills. These general ideas were supported by demonstrating a significant effect of training condition on several of the attributes associated with high quality leader self-development activities.

First, as discussed in the results section, there were differences across training conditions regarding leader self-development choice during the post-training measurement period. The interaction between training condition and leader self-development choice in Study 1 indicated that the training was successful in helping individuals who did not engage in leader self-development in Study 1 to do so in Study 2. One explanation for this finding is that providing individuals with training on how to best set goals and go about engaging in leader self-development makes the act of doing so no longer as daunting and increases self-efficacy regarding leader self-development is heightened. Those participants who received the training and created learning contracts may have also felt more motivated to fulfill their contracts, and thus, engaged in leader self-development activities as one means of accomplishing their goals. These explanations both support the idea of the training being useful in terms of learning to

learn. Individuals may not engage in leader self-development activities because they do not understand the processes involved in self-development. However, if they can be provided with this information and given useful tips for engaging in leader self-development, they will be more inclined to do so.

The training also had an impact on the quality of leader self-development activities in the month following the training; specifically it was influential in impacting the attributes of challenge, learner engagement and learner control. Those participants who received the training were more likely than participants who did not receive the training to choose leader self-development activities that were more challenging and involved more learner engagement and learner control. It is theorized that the training material that involved information about how to set difficult and specific goals triggered engagement in more challenging leader self-development activities to align the difficulty of the goal with the difficulty of the activity (c.f., Latham & Locke, 1991).

As stated, the learner engagement of the individuals in the training condition was significantly greater than the levels of engagement in the self-development activities of those who did receive the training. By choosing activities that require more learner engagement, those participants are directly aligning themselves with principles of adult learning that encourage active discovery and learning. The training may have impacted this choice by motivating individuals to take control of their own development. Also by training individuals to discern strengths and weaknesses, those participants should be more motivated to improve weaknesses, hence resulting in more effortful activities (Bandura & Locke, 2003).

Finally, although not hypothesized, the learner control in one's self-development activities was also impacted, with those individuals who received the training more likely to exert higher levels of learner control in their leader self-development activities. There are several reasons for this finding. First, one intended impact of the learning contract, which culminated the training, was to provide self-developers with a sense of control over their own development. Individuals who created a learning contract have specified concrete processes regarding how they will reach their goals; these individuals are more likely to exert control over their leader self-development activities given that they know precisely the methods they would like to use to develop their leadership skills. Those individuals who exhibit more learner control over their leader self-development activities also exhibit a higher willingness to take control of their own learning, thereby demonstrating increased regulatory processes. Controlling the pacing, sequencing, objectives and content of leader self-development activities requires high levels of self-regulation in order to successfully reach set goals.

Given the emphasis in the training on the development of new perspectives, it is surprising to some degree that there was no significant effect of training condition on the experiential variety provided by an individual's leader self-development activities nor on adaptive performance. It is likely that this manipulation was not strong enough. Although the training discussed the importance of adopting new perspectives through self-development activities, it is possible that individuals did not transfer that information into action in terms of the experiential variety. Given the positive relationship between

experiential variety and adaptive performance, future research should explore how individuals can be trained with an eye specifically toward increasing experiential variety.

Although the general curriculum of this training surrounded self-appraisal and self-regulation skills, no differences were found in these skill-sets across training conditions. The findings associated with this training program can be examined in terms of Kirkpatrick's (1994) four levels of training evaluation: Reaction, Learning, Behavior, and Results. Differences in self-appraisal and self-regulation skills across training conditions would be considered learning data; the differences found in terms of the attributes associated with high quality leader self-development activities can be considered behavior data. The learning of self-regulation and self-appraisal skills manifested itself through applying the general principles associated with each of the skill-sets in self-development activities. Also, although the training focused on the development of self-appraisal and self-regulation skills, the material in the training may not have directly translated to the items on the self-report measures assessing these two attributes. For example, the training on self-regulation focused on how to set goals and the items in the self-regulation measure is focused more on meta-cognitive activity. Provided that true learning is not necessarily manifested in knowledges and skills (Schmidt & Bjork, 1992), the resultant behavioral change across conditions indicates that the training manipulation was successful.

This study set out to demonstrate that individuals can be trained to make more effective choices regarding their leader self-development activities. This general thesis was supported. These results demonstrate that individuals may not always be cognizant

of the choices they are making in terms of their self-development activities; if organizations are interested in employees engaging in higher quality leader self-development activities, employees need to be trained on the fundamental elements surrounding self-development.

General Discussion

The results of the two studies have important implications for self-development in terms of growing leader capacity. Study 1 illustrated that when leader self-development activities possess certain attributes, engagement in these activities results in outcomes associated with leader effectiveness – namely adaptive performance and team performance. Study 1 also demonstrated that these same attributes are predicted by external leader behaviors and individual skills. Study 2 expanded upon the Study 1 results and demonstrated that training can impact the choices that individuals make regarding their leader self-development activities.

This dissertation has several implications for the growth of adaptive performance within leaders, with the main idea centering on the development of new perspectives in individuals. One of the most striking results was that training can impact the learner control individuals choose to have in their leader self-development activities, the same attribute that was demonstrated to have the strongest effect on one's adaptive performance. Even though the training in this research did not have a direct impact on adaptive performance, it can be indirectly impacted through training that influences the learner control individuals choose in their self-development activities.

As demonstrated in Study 1, the experiential variety provided by leader self-development activities is also instrumental in predicting adaptive performance. The

training program administered in Study 2 did not impact the experiential variety that individuals chose in their leader self-development activities. Future research should explore how trainees can be directly addressed regarding the growth of new perspectives through leader self-development activities. One suggestion is to provide trainees with a method for reflecting upon their experiences after engagement in one self-development activity. By providing trainees with a more stringent method of evaluating their leader self-development activities in terms of the development of new perspectives, it is likely that the experiential variety present in their activities will be impacted to a greater extent through training. Given the relationship between experiential variety and adaptive performance, it is very important to be able to influence the variety of activities present in one's leader self-development activities.

As discussed in Study 1, it is thought that one component of a challenging activity that would make it particularly useful for the growth of adaptive performance in leaders is the degree of novel information or perspectives introduced by the self-development activity. Through continuous involvement in novel situations, individuals must become adept at succeeding in them, meaning that they must expand their frames of references to integrate all of the new information. It is thought that the method of coding used to assess the challenge involved in the participants' self-development activities was not able to adequately tap into this portion of the attribute. Future research should explore alternative ways of assessing the novelty involved in a leader self-development activity.

Taken together, the results in this dissertation inform the leader self-development literature in three ways. First, it reaffirms and extends the taxonomy of attributes

associated with high quality self-development activities by Orvis (2007); the results of this study again indicate the importance of assessing the actual attributes associated with self-development activities instead of simply looking at frequency of self-development activities or intent to engage in self-development. Second, these results demonstrate how leader self-development activities can be instrumental in the building up of adaptability within leaders. Effective leaders are adaptive leaders and by explicating the methods through which leader self-development facilitates such growth, self-development becomes a viable option for which to increase a leader's frame of reference and adaptive performance. Third, this research delineated specific leader behaviors that have an impact on the choices that individuals make regarding their leader self-development activities. The role of the leader as a great source of influence is highlighted. Organizations have the power to train their leaders to exhibit the types of behaviors that will be most beneficial to the occurrence of effective leader self-development within its employees. This type of training is sure to foster continuous learning environments within organizations, providing them with one additional competitive advantage needed to succeed in dynamic environments.

Limitations

There are several limitations of this research that must be addressed. First, although conducting research with qualitative research helps to eliminate method bias associated with same source measurement across dependent and independent variables, there are concerns with this method as well. Namely, a large issue is that qualitative data is limited to information that the participant shares. One participant may not have been

willing to invest as much time writing a detailed response as another participant, impacting the data available. However, given that significant results were demonstrated using the qualitative data available, this method does appear to provide a valuable source of information that most likely cannot be captured as well in another fashion.

Next, given the multiple measurement periods involved in this dissertation, self-selection and attrition is always a concern. The number of participants responding to the time one measurement in Study 1 was lower than the number of participants responding in Study 2, and of course, obtaining data from a third time period would also have been extremely fruitful. Reliable data from a third measurement period may allow time for the training to lead to performance improvement.

A third limitation with this study concerns the generalizability of the findings given that the data from this dissertation were all derived from one organization that values leader self-development activities. The findings in this dissertation should be replicated with another organization that may not emphasize the importance of leader self-development to evaluate what types of choices employees make regarding self-development when it is not a part of the organizational culture.

Notwithstanding these limitations, this dissertation provides insights into leader self-development that have not been examined in past research. Future research should continue to explore the relationship between leader self-development activities and leader effectiveness. Organizations would also benefit from educating employees on the choices that are inherent in leader self-development activities to ensure the effectiveness of those activities.

Appendix A – Tables

Table A1

Definitions of Instructional Design Attributes

Instructional Design Attribute	Definition
Content Relevancy	<i>Content relevancy</i> is the degree to which the content of an instructional activity aligns with or directly addresses specific knowledge or skill(s) in need of development.
Learner Engagement 2 components: a. Practice b. Progress evaluation information	<i>Practice</i> is the degree to which an instructional activity requires the learner to produce responses, cognitive or physical, using the instructional content of the activity rather than merely watching, listening, or reading the content. <i>Progress evaluation information</i> is the degree to which an instructional activity provides for the obtainment of direct and specific information about one’s current mastery level and progress with respect to learning and development efforts.
Challenge	<i>Challenge</i> is the degree to which an instructional activity represents a personally demanding situation requiring a considerable amount of cognitive or physical effort in order to develop the learner’s knowledge and/or skill levels.
Learner control	<i>Learner control</i> is the degree to which the learner determines the content to be learned, the objectives, pacing, and hierarchical structure and sequencing of the instructional material during the self-development activity.

Note: Adopted from (Orvis, 2007)

Table A2

Mean, Standard Deviations, and Correlations between Main Variables

	Mean	SD	1	2	3	4	5	6
1. Adaptive Performance	6.34	2.08						
2. Team Performance	3870.06	4310.99	-.01					
3. Leader Identity	5.66	1.06	.18*	.29**	(.94)			
4. Leader Modeling Behaviors	6.06	.97	.12	.23**	.19**	(.80)		
5. Self-Regulation Skills	4.66	.81	.18*	.01	.33**	.20**	(.77)	
6. Self-Appraisal Skills	4.81	.84	.21**	.19*	.47**	.35**	.67**	(.73)
7. No/Yes Self-Development	1.80	.40	.025	.22**	.37**	.16*	.18*	.30**

Sample Sizes range from 150-232; * $p < .05$, ** $p < .01$

Note: Internal Consistencies (α), where appropriate, are in parentheses on the diagonal

No/Yes Self-Development is a dichotomous variable representing whether or not a participant engaged in self-development. 1 = No, self-development; 2 = Yes, self-development

Table A2 (con't)

Mean, Standard Deviations, and Correlations between Main Variables

	Mean	SD	8	9	10	11	12	13
8. Content Relevancy	22.28	2.87						
9. Learner Control	2.64	.98	.17					
10. Experiential variety	3.11	1.42	.14	.03				
11. Learner Engagement	2.10	1.14	.33**	.18*	.13			
12. Challenge	2.07	1.43	.37**	.26*	.07	.83**		
13. Scope and Scale	2.02	.95	.41**	.09	.10	.35**	.37**	
14. Quantity	5.82	5.34	.09	.05	.37**	-.03	-.02	.01

Sample Sizes range from 150-232; * $p < .05$, ** $p < .01$

Table A2 (con't)

Mean, Standard Deviations, and Correlations between Main Variables

	8	9	10	11	12	13	14
1. Adaptive Performance	.13	.22*	.21*	.04	.04	.03	.19*
2. Team Performance	.01	-.01	.21*	-.06	.01	.16	.20*
3. Leader Identity	.08	.05	.09	.08	.01	.20*	.09
4. Leader Modeling Behaviors	.15	.03	.21*	-.01	-.01	.03	-.04
5. Self-Regulation Skills	.14	.06	.05	.08	-.01	.15	-.16
6. Self-Appraisal Skills	.17	.19*	.21*	.20*	.20*	.18*	-.05
7. No/Yes Self-Development	a	a	a	a	a	a	a

Sample Sizes range from 150-232; * $p < .05$, ** $p < .01$

Note: No/Yes Self-Development is a dichotomous variable representing whether or not a participant engaged in self-development. 1 = No, self-development; 2 = Yes, self-development

^a No correlation is possible, given that if a participant did not engage in self-development, there are no quality ratings available.

Table A3

Hierarchical Multiple Regression Predicting Adaptive Performance from Leader Self-Development Quality Attributes

Variable	β	
<u>Predicting Adaptive Performance</u>		
STEP 1		
Learner Engagement	.04	
Content Relevancy	.12	
Challenge	-.02	
R^2		.02
STEP 2		
Learner Control	.21*	
Experiential Variety	.18*	
ΔR^2		.07*

* $p < .05$

Table A4

Multiple Regression Predicting Adaptive Performance from Skill Variables

Variable	β	
<u>Predicting Adaptive Performance</u>		
Self-Appraisal Skills	.15	
Self-Regulation Skills	.08	
R^2		.05*

* $p < .05$

Table A5

Multiple Regression Predicting Team Performance from Leader Self-Development

Quality Attributes

Variable	β
<u>Predicting Team Performance</u>	
Learner Engagement	-.18
Content Relevancy	-.01
Challenge	.12
Learner Control	-.16
Experiential Variety	.27*
R^2	.08

* $p < .01$

Table A6

Moderated Regression Analyses Predicting Team Performance from Experiential Variety and Challenge

Model	β	Se B
<u>Predicting Team Performance</u>		
STEP 1		
Experiential variety	.27	306.31
Challenge	-.05	286.47
R^2	.07**	
STEP 2		
Variety*Challenge	.17	192.90
ΔR^2	.03*	

* $p = .06$, ** $p < .01$

Table A7

Multiple Regression Predicting Team Performance from Motivational Variables

Variable	β
<u>Predicting Team Performance</u>	
Leader Modeling Behaviors	.18*
Leader Self-Identity	.24**
R^2	.11**

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

Table A8

Logistic Regression Predicting Self-Development Choice from Motivational Variables

Variable	B	Odds Ratio
<u>Predicting Self-Development Choice</u>		
Leader Modeling Behaviors	.25	1.29
Leader Self-Identity	.70*	2.01
χ^2		19.65*

* $p < .01$

Table A9

Logistic Regression Predicting Self-Development Choice from Skill Variables

Variable	B	Odds Ratio
<u>Predicting Self-Development Choice</u>		
Self-Regulation Skill	-.18	.83
Self-Appraisal Skill	1.02*	2.77
χ^2		16.31*

* $p < .01$

Table A10

Moderated Regression Analyses Predicting Content Relevancy from Leader Modeling Behaviors and Self-regulation

<i>Model</i>	β	Se B
<u>Predicting Content Relevancy</u>		
STEP 1		
Leader Modeling Behaviors	.11	.30
Self-Regulation	.08	.32
R^2	.02	
STEP 2		
Modeling*Self-Regulation	.24	.40
ΔR^2	.07*	

* $p < .01$

Table A11

Moderated Regression Analyses Predicting Content Relevancy from Leader Modeling Behaviors and Self-Appraisal

<i>Model</i>	β	Se B
<u>Predicting Content Relevancy</u>		
STEP 1		
Leader Modeling Behaviors	.09	.31
Self-Appraisal	.08	.36
R^2	.02	
STEP 2		
Modeling*Self-Appraisal	.15	.37
ΔR^2	.04*	

* $p < .10$

Table A12

Mediated Regression Analysis Predicting Adaptive Performance from Self-appraisal and Experiential Variety

<i>Model</i>	<i>B₁</i>	Se B
<u>Predicting Adaptive Performance</u>		
STEP 1		
Self-Appraisal	.21	.20
<i>R</i> ²	.04**	
STEP 2		
Experiential variety	.21	.13
<i>R</i> ²	.04*	
STEP 3		
Self-Appraisal	.17	.24
Experiential variety	.17	.13
<i>R</i> ²	.07*	

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

Table A13

Mediated Regression Analysis Predicting Adaptive Performance from Self-appraisal and Learner Control

<i>Model</i>	<i>B₁</i>	<i>Se B</i>
<u>Predicting Adaptive Performance</u>		
STEP 1		
Self-Appraisal	.21	.20
<i>R</i> ²	.04**	
STEP 2		
Learner control	.22	.18
<i>R</i> ²	.05*	
STEP 3		
Self-Appraisal	.17	.24
Learner control	.19	.18
<i>R</i> ²	.08**	

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

Table A14

Mediated Regression Analysis Predicting Team Performance from Self-appraisal and Experiential Variety

<i>Model</i>	<i>B₁</i>	Se B
<u>Predicting Team Performance</u>		
STEP 1		
Self-Appraisal	.19*	413.8
<i>R</i> ²	.04	
STEP 2		
Experiential variety	.21	292.63
<i>R</i> ²	.04*	
STEP 3		
Self-Appraisal	.09	557.73
Experiential variety	.19	298.14
<i>R</i> ²	.05*	

* *p* < .05

Table A15

Logistic Regression Analysis Predicting Self-Development Choice at Time 2 from Training Condition

<i>Model</i>	B	Odds Ratio
<u>Predicting Self-Development at T2</u>		
STEP 1		
Self-Development Time 1	1.54**	4.67
Training vs. Control	.21	1.23
Step χ^2	9.38**	
STEP 2		
Interaction		
- SD T1* Condition	1.28*	1.28
Step χ^2	3.75*	

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

Note: SD T1 corresponds to leader self-development choice at Time 1; T2 = Time 2

Table A16

Hierarchical Regression Analyses Predicting Attributes of Self-Development Activities at Time 2 from Training Condition

<i>Model</i>	β	Se B
<u>Predicting Challenge at T2</u>		
STEP 1		
Challenge Time 1	-.05	.14
R^2	.01	
STEP 2		
Training vs. Control	.27	.40
ΔR^2	.07*	
<u>Predicting Learner Engagement at T2</u>		
STEP 1		
Learner Engagement Time 1	.01	.15
R^2	.01	
STEP 2		
Training vs. Control	.28	.34
ΔR^2	.08*	
<u>Predicting Learner Control at T2</u>		
STEP 1		
Learner Control Time 1	.13	.14
R^2	.02	
STEP 2		
Training vs. Control	.26	.26
ΔR^2	.07*	

* $p < .05$

Note: T2 = Time 2

Table A17

Moderated Regression Analyses Predicting Time 2 Variables from Training Condition

<i>Model</i>	β	Se B
<u>Predicting Self-Regulation at T2</u>		
STEP 1		
Self-Regulation Time 1	.69**	.09
Training vs. Control	.05	.09
R^2	.47**	
STEP 2		
Self-Regulation T1* Training Condition	-.24	.18
ΔR^2	.03	
<u>Predicting Self-Appraisal at T2</u>		
STEP 1		
Self-Appraisal Time 1	-.14	.01
Training vs. Control	.03	.11
R^2	.02	
STEP 2		
Self-Appraisal T1* Training Condition	-.17	.01
ΔR^2	.01	
<u>Predicting Adaptive Performance at T2</u>		
STEP 1		
Adaptive Performance Time 1	.25*	.13
Training vs. Control	-.01	.30
R^2	.08	
STEP 2		
Adaptive Performance T1* Training Condition	-.16	.26
ΔR^2	.01	
<u>Predicting Team Performance at T2</u>		
STEP 1		
Team Performance Time 1	.50**	.20
Training vs. Control	-.04	1082.74
R^2	.23**	
STEP 2		
Team Performance T1* Training Condition	-.05	.37
ΔR^2	.01	

* $p < .05$, ** $p < .01$; Note: T2 = Time 2

Appendix B

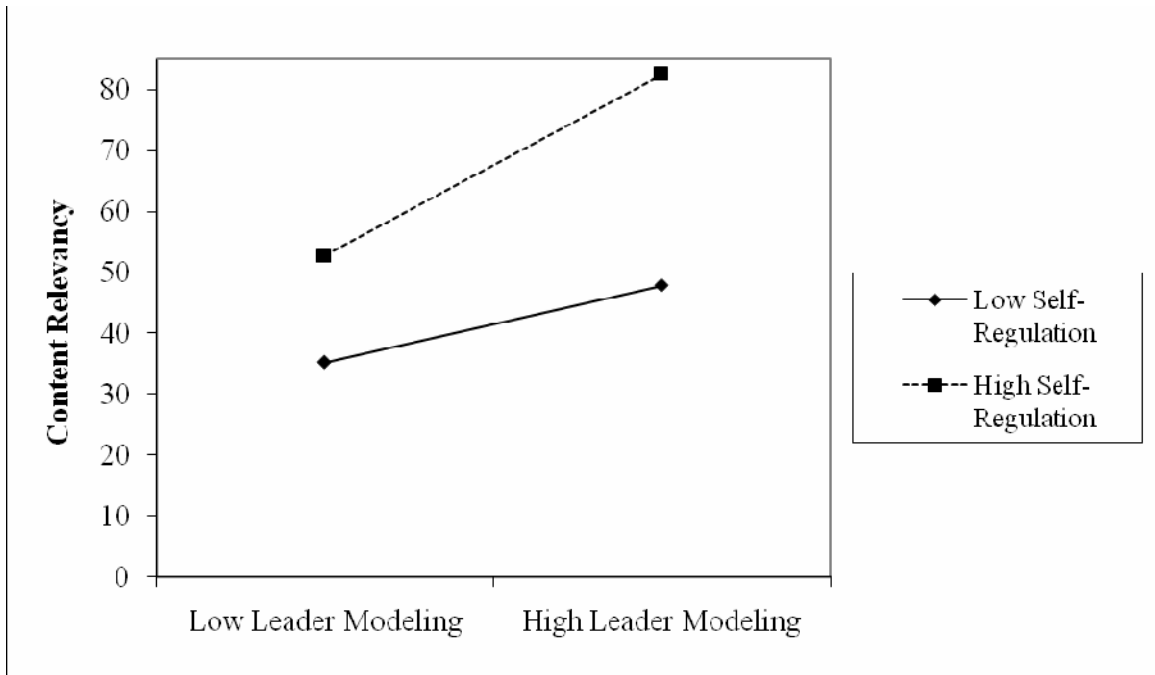
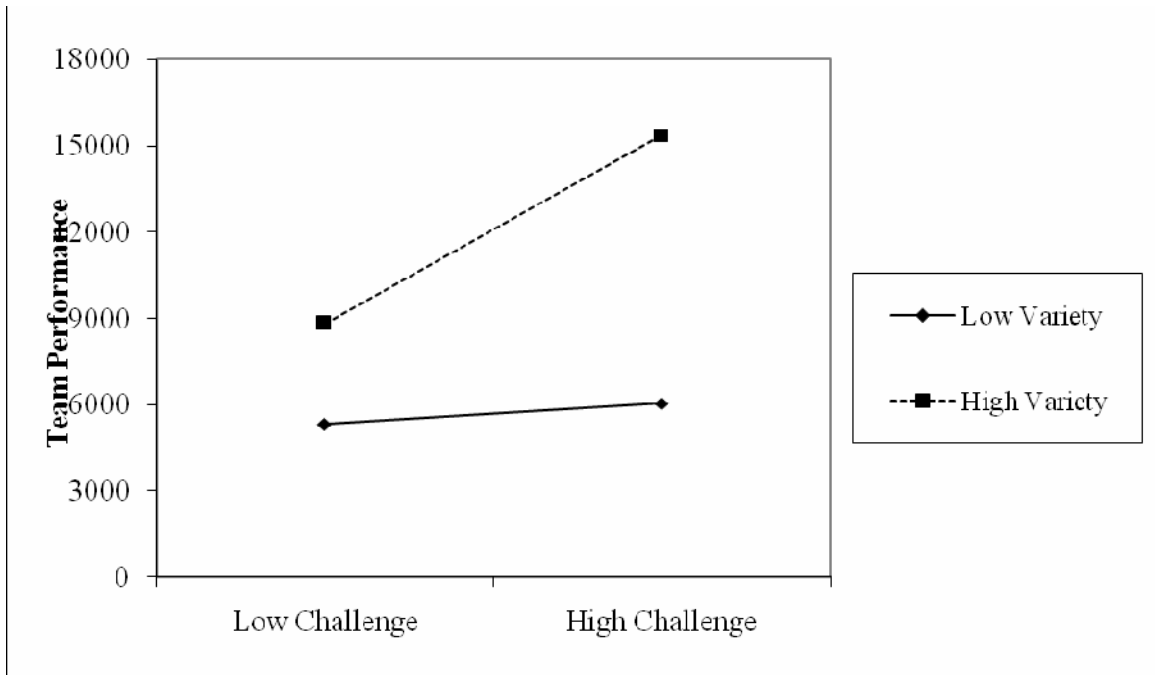
Figure Captions

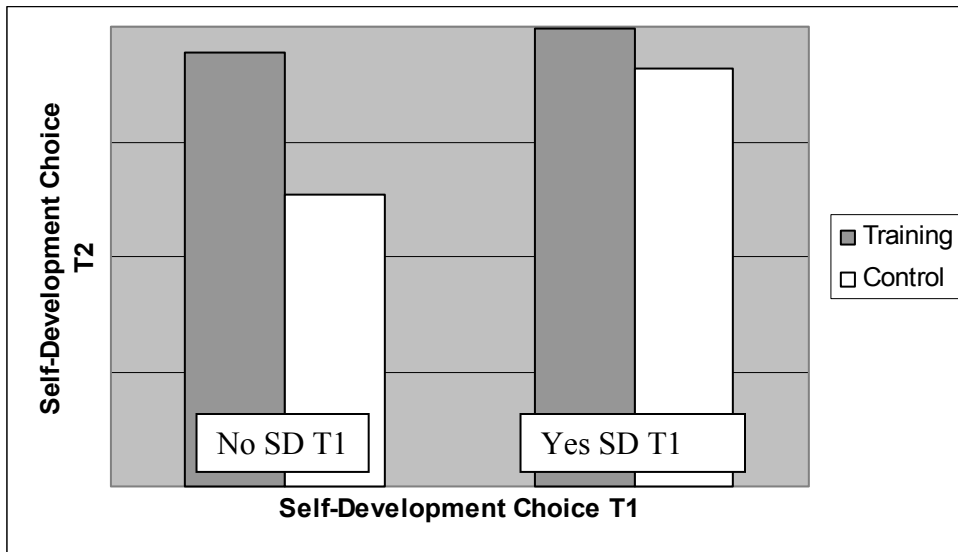
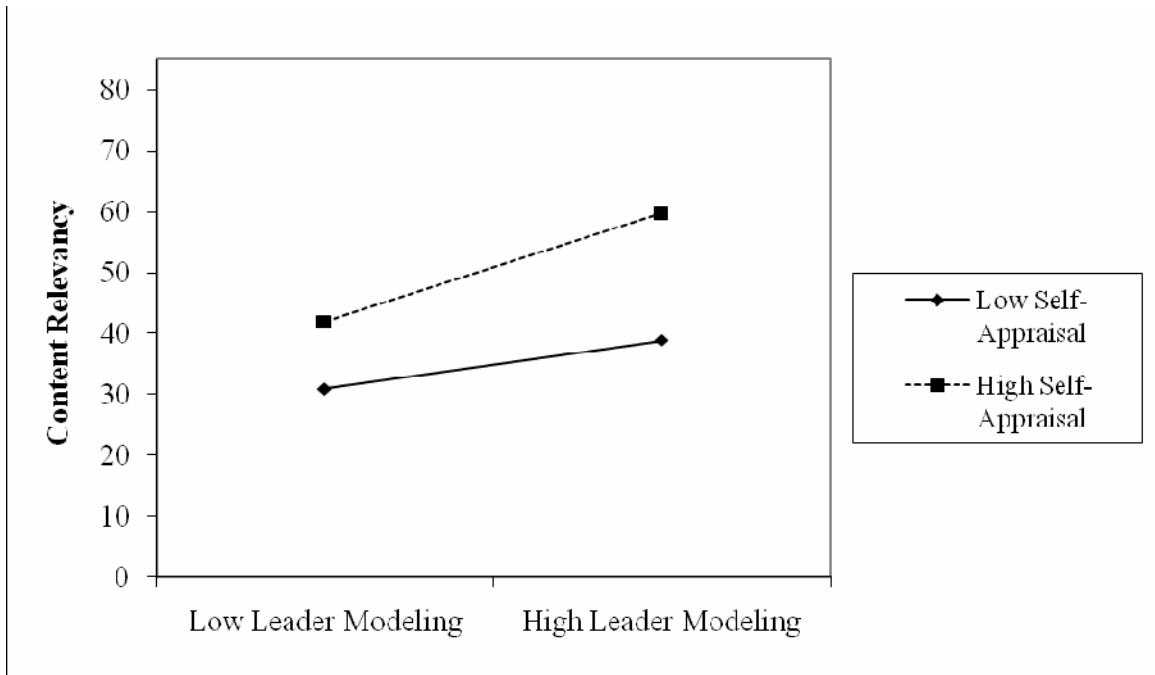
Figure 1B. Challenge by experiential variety interaction predicting team performance.

Figure 2B. Significant interaction between leader modeling behaviors and self-regulation (SR) in the prediction of content relevancy.

Figure 3B. Significant interaction between leader modeling behaviors and self-appraisal skills (SA) in the prediction of content relevancy.

Figure 4B. Impact of training on leader self-development choice at Time 2.





Note: No SD T1 indicates participants did not engage in leader self-development at Time 1; Yes SD T1 indicates participants did engage in leader self-development at Time 1.

Appendix C – Measures

** Unless otherwise noted, all responses are on a 7-point scale, ranging from *Strongly Disagree* to *Strongly Agree*. **

Empowering Leadership (Ahearne, Mathieu, & Rapp 2005)

1. My team leader helps me understand how my objectives and goals relate to that of the company.
2. My team leader helps me understand the importance of my work to the overall effectiveness of the organization.
3. My team leader helps me understand how my job fits into “the bigger picture.”
4. My team leader often consults me on strategic decisions.
5. My team leader provides many opportunities for me to express my opinion.
6. My team leader believes that I can handle demanding tasks.
7. My team leader believes in my ability to improve even when I make mistakes.
8. My team leader allows me to do my job my way.
9. My team leader makes it more efficient for me to do my job by keeping the rules and regulations simple.
10. My team leader allows me to make important decisions quickly to satisfy customer needs.

(Subscales: Enhancing Meaningfulness – items 1-3; Fostering Participation in Decision-Making – items 4 and 5; Expressing Confidence in High performance – items 6 and 7; Providing Autonomy – items 8-10.)

Empowered Cognitions (Spreitzer, 1995)

1. The work I do is very important to me.
2. My job activities are personally meaningful to me.
3. The work I do is meaningful to me.
4. My impact on what happens in my organization is large.
5. I have a great deal of control over what happens in my organization.
6. I have significant influence over what happens in my organization.
7. I am confident about my ability to do my job.
8. I am self-assured about my capabilities to perform my work activities.
9. I have mastered the skills necessary for my job.
10. I have significant autonomy in determining how I do my job.
11. I can decide on my own how to go about doing my work.
12. I have considerable opportunity for independence and freedom in how I do my job.

(Subscales: Meaning – items 1-3; Impact – items 4 - 6; Competence – items 7-9; Self-determination – items 10-12.)

Leader Consideration Behavior Measure
Stogdill (1963)

Think about how frequently your team leader engages in the behavior described by the item.

Please rate on a 1-5 scale (1 = Always, 2 = Often, 3 = Occasionally, 4= Seldom, 5 = Never)

1. Is friendly and approachable.
2. Does little things to make it pleasant to be a part of his/her team.
3. Puts suggestions made by the group into operation.
4. Treats all group members as his or her equals.
5. Gives advance notice of changes
6. Keeps to him/herself.
7. Looks out for the personal welfare of group members.
8. Is willing to make changes.
9. Refuses to explain actions.
10. Acts without consulting the group.

Leader Modeling Behaviors

- 1) My team leader is continually working to improve upon his/her leadership skills.
- 2) My team leader encourages participation in leader development activities by engaging in these activities her/himself.
- 3) Often times I attend leader training sessions that my team leader is also attending or has attended in the past.
- 4) My team leader is continually initiating activities that develop his/her leadership skills.

Leader Self-Identity (Hiller, 2005)

Please rate the extent to which the following statements describe you. (1 = not at all descriptive; 7 = extremely descriptive)

1. I am a leader
2. I see myself as a leader.
3. If I had to describe myself to others, I would include the word “leader.”
4. I prefer being seen by others as a leader.

How important is this self-view of yourself? (1 = not at all important; 7 = extremely important)

1. I am a leader
2. I see myself as a leader.
3. If I had to describe myself to others, I would include the word “leader.”
4. I prefer being seen by others as a leader.

How certain are you about each of these statements? (1 = not at all certain; 7 = extremely certain)

1. I am a leader
2. I see myself as a leader.
3. If I had to describe myself to others, I would include the word “leader.”
4. I prefer being seen by others as a leader.

Self-Appraisal Skills Measure (Cortina et al., 2004)

1. Within the last month, I have voluntarily taken measures in order to determine my strengths and weaknesses.
2. In the past month, I have been surprised when receiving feedback concerning my strengths and weaknesses.
3. In the past month, I have often been successful in identifying the probable cause of a system malfunction.
4. In the past month, I gained a sense of satisfaction from investigating the probable cause of a system malfunction.
5. In the past month when I began a new assignment that I wasn't unfamiliar with, I often asked questions of many different people in an attempt to gather information.
6. In the past month, before beginning a new task or job, I attempted to improve skills that I assumed would be needed.
7. In the past month, I routinely took a step back and observed my own work to assess what I did right and what I did wrong.
8. In the past month when given a new assignment, I began by assessing the situation and what I needed to learn to deal with the tasks at hand.
9. Thinking about the past month, how would your supervisor rate your ability to accurately assess your strengths and weaknesses?
10. Thinking about the past month, how would your supervisor rate your ability to identify the skills and abilities that come naturally to you and those you need to work on?

Motivated Strategies for Learning Questionnaire (Pintrich, et al., 1991)

Instructions: When answering these questions, please think of your behaviors during the *last month only*.

- 1) During the last month, when listening to someone give a presentation, I often missed important points because I was thinking of other things. (R)
- 2) During the last month, when reading material I was not familiar with, I made up questions to help focus my reading.
- 3) During the last month, I asked myself questions to make sure I understood the material that I have been reading.
- 4) During the last month, I often found that when I have been reading, I didn't know what the material was all about. (R)
- 5) During the last month, when I became confused about something I was reading, I went back and try to figure it out.
- 6) During the last month, if something I was reading was difficult to understand, I changed the way I read the material.
- 7) During the last month, when taking a class, I tried to change the way I studied in order to fit the course requirements and the instructor's teaching style.
- 8) During the last month, if I got confused when learning something new, I made sure I sorted it out afterwards.
- 9) During the last month, before I read something with which I was not familiar, I often skimmed it to see how it was organized.
- 10) During the last month, I tried to think about a topic and decide what I am supposed to learn from it rather than just reading it.
- 11) During the last month, when studying something I was not familiar with, I tried to determine which concepts I didn't understand well.
- 12) During the last month, when I studied new material, I set goals for myself in order to direct my efforts.

(Subscales: Monitoring – items 1-4; Regulating – items 5 - 8; Planning – items 9-12.)

Adaptive Thinking Measure Scenarios

Scenario 1:

The Miami-based fruit juice company, DrinkWell, recently promoted their Marketing Director Maria to CEO. Maria has been with the company for 10 years and is credited with the marketing campaign that maintained DrinkWell's steady performance. DrinkWell has been around for the last 25 years and is doing well; they have the market cornered on school vending machines and are sold in many area restaurants. The company runs like a well-oiled machine. However, Sam, recently hired as a regional sales manager, has begun questioning both the marketing campaign and the lack of creativity within the office; he believes that DrinkWell had to innovate or else they would not be able to compete any longer. The people who have been at DrinkWell for awhile do not like Sam and think that he is creating too much conflict. Maria does not like the conflict that Sam is causing but also thinks that he has some great ideas. However, because DrinkWell shows no signs of slowing down financially, any long-term benefit associated with implementing Sam's ideas may not be worth the conflict that may ensue among employees. Breaking away from the established mold is just not the DrinkWell way. In order to help her solve this problem, Maria approaches you, a senior member of the board of directors, for advice. How do you tell Maria to proceed?

Subsequent change:

A few months later, after Maria took your advice and things seemed to be running smoothly, Maria announced that she was resigning in order to start her own fruit juice company. You are distressed by this news for a few reasons. Besides the fact that Maria was an asset to the company, you wonder if Maria's knowledge about the (arguable) lack of creativity within DrinkWell will allow her new company to have the upper-hand. You also are not sure what to do with Sam; Maria was the one to keep things at bay in that arena. A new CEO may see Sam as causing too much conflict, but it seems to you that DrinkWell needs Sam's innovations more than ever. What sort of advice do you have for the new CEO about keeping DrinkWell competitive while also keeping the employees happy?

Scenario 2:

You run a U.S.-based research and development firm that has many international clients throughout Europe and South America. At any one time, up to 30 project managers (all American) are in these areas of the world working with your international clients. For several of your long-term projects, these project managers are sent abroad to live for up to three years throughout the duration of a project. You recently read a research article that noted up to 20 percent of U.S. managers sent abroad come back early due to culture shock or job dissatisfaction, and that one-third of those who stay abroad do not meet their supervisor's performance expectations. This rate of turnover is twice that of managers that remain in the U.S., and perhaps even more alarming is the fact that one-fourth of the managers that complete their assignment leave the company in favor of a competitor within one year. This reminds you of an informal survey issued last year within your company that revealed 16 of your 27 managers abroad were either unhappy with their

jobs or perceived a significant contrast between their working style and the style of others in their host country. Knowing that such statistics may result in the loss of several quality managers, you decide that something needs to be done to address this issue. What actions do you take toward solving this problem?

Subsequent change:

Only three weeks into your plan, your company is bought by a technology firm based in India. Their corporate culture is growth-focused and highly aggressive – a sharp contrast to your existing culture. Their goal is for your company to increase profits by 20% in year one, and by an additional 10% each following year. They decide to keep you on the management team, as it is clear that they have acquired your company for access to existing and future international clients. Their focus on your international work will put a greater demand on your managers and units stationed in Europe and South America to build profit quickly while enhancing client relationships. Given the pressure to quickly adopt this new aggressive business style and the need to please your international clients, what adjustments do you make?

Self-Development Participation Measure (Orvis, 2007)

We are interested in learning about your participation in leader self development activities.

What is a self development activity?

A self development activity is a **voluntary** activity that you **deliberately** perform for the purpose of learning something new for your job or improving your job skills or knowledge.

Self development activities are **NOT mandatory or required** by your Department or supervisor.

Leader self-development activities consist of any activity that you engage in to better your skills as a leader. Your job requires you to continually help and guide others; think about what skills you need to do this. Any activity that you engage in to further those skills would be considered *leader* self-development.

For example, you may have completed a *voluntary training course* provided by your organization, attended a course offered by a local college, watched a *videotape* or conducted a *lesson* from your organization's website. You may have read a job-relevant *book* or *magazine article*, attended a *conference*, or volunteered to take on new *committee assignment*. These are just a few examples of leader self development activities.

Additional types of self development activities are listed in the *Overview*.

Question: Think back over the last month; we are interested in any deliberate, yet voluntary effort you made to learn leadership skills that will be helpful for your job.

Within the last month, have you participated in one or more leader self-development activities?
(**Check Yes or No.**)

- Yes** If you answered "yes," please continue to answer the questions below.
 No If you answered "no," please skip to the final question (Q24) asking about your performance over the past month.

In the space provided below, please list all of the leader self-development activities you participated in during the last month, how often you did each activity, and the amount of time it took to complete.

Example Response: (1) Attended workshop on conflict resolution once for 3 hours; (2) Read 3 books on listening skills; each took me 2 hours to complete.

1. Please describe this self-development activity in the space provided below.



It is important that your description be as complete and detailed as possible, so that a stranger could understand all the specific components or subtasks that were involved in the activity. For instance, explain exactly: (a) what you did during the activity, (b) what you were intending to gain/learn from completing the activity, (c) how you became aware of this particular activity, and (d) what was the most difficult component of this self development activity (in terms of mental or physical effort required) for you (if any) and why.

Before providing your description... please read the following example activity descriptions.

A complete, detailed description and an incomplete description are provided for two sample self-development activities to illustrate the level of detail we need you to provide in your own descriptions.

Sample Activity 1: Attended a workshop

INCOMPLETE description:

- I attended a workshop. It covered various strategies to use to resolve conflict. As part of the workshop, the attendees interacted with one another doing several small exercises.

COMPLETE description:

(a) Explain exactly what you did during the activity:

- I attended a workshop called Enhancing Conflict Resolution Skills.
- For the first half of day 1, the instructor lectured about various strategies to use to resolve different types of conflict that may occur between your subordinates. This information was pretty straight forward. I already knew about half of the strategies suggested.
- Then, we did hands-on activities as a group. The instructor gave us hypothetical conflict situations & the workshop attendees brainstormed different ways to resolve those situations.
- We also did role-plays of five different workplace conflict scenarios. After each role-play, the instructor and attendees gave the role-players feedback on things they did well and strategies they could have used. I was the role-player for one role-play.

(b) Explain what you were intending to gain/learn:

- I knew that I needed to learn how to better handle conflicts that happen with my subordinates. I thought it could provide me with some strategies on how to avoid arguments or better resolve them.

(c) Explain how you became aware of this activity:

- A coworker told me about it. She participated in it last year and said it helped her.

(d) Explain what was the most difficult component of this self development activity (in terms of mental or physical

effort required) for you (if any) and why:

- Being a role-player and having to decide on the spot the best way to resolve the conflict.

1. Description of Most Relevant Leader Self-Development Activity You Completed:

Remember to please be as thorough and detailed as possible, so that a stranger could understand all the specific components or subtasks that were involved in this activity. There are no predetermined "right answers." You may use bullet points versus writing in complete sentences.

(a) Explain exactly what you did during the activity:

(b) What was your overall learning objective with this activity? Describe the skills that you learned through this activity.

(c) Explain how you became aware of this activity. Why did you believe that this self-development activity would help you achieve your learning objective?

(d) Looking back on your engagement in this activity and what you learned, would you have done anything differently to more effectively achieve your learning objective? If yes, what?

Please respond to the remaining items below with regards to the self development activity you just described.

2. Where did you complete this self development activity?
 Work University
 Home Other (*please specify*) _____
3. Give your best estimate of the total hours you spent performing this activity. _____ hours
4. Give your best estimate of the span of time over which this activity took place. (Please indicate total length of time in number of weeks and days.) (*For example, if you spent 20 hours, was it across 5 days or 6 weeks?*)
_____ week(s) and _____ day(s)
5. Was this activity provided by your organization? Yes No
6. Was your participation in this activity optional? Yes No

Please mark the number indicating the extent to which each of the following aspects of this leader self-development activity was personally determined by you. In other words, to what extent was each of these aspects under your own control as the learner, as opposed to being determined by another individual (such as an instructor, trainer or team leader) or by the structure of the self-development activity itself?

** Scale: 1 (*Not at all*); 2 (*To a small extent*); 3 (*To a moderate extent*); 4 (*To a fairly large extent*); 5 (*To a very great extent*).

7. To what extent did you personally determine your own *learning goals* to be achieved (i.e., improvement of particular knowledge or skills or learning specific topics) during this self development activity?
8. To what extent did you have the opportunity to choose the specific *content* to be learned (i.e., topics, practice activities, hands-on-experiences) in this activity?
9. To what extent did you personally create your own learning activities, experiences, and material for this activity?
10. To what extent did you personally select the *order* in which to learn and practice the content in this activity (i.e., the order of topics and activities to complete)?
11. To what extent did you personally set the *pace* in terms of what content (i.e., topics, practice or “hands-on” activities) was learned or practiced when and in what length of time?

Please mark the number indicating the extent to which you agree with each of the following statements.

** Scale: 1 (*Strongly Disagree*) to 7 (*Strongly Agree*)

12. During this self development activity, I practiced the behaviors, tasks or skills I was developing (e.g., I practiced by leading a discussion, role-playing, performing the behaviors or skill, writing a paper or report, verbalizing what I was learning).

13. I applied the information or skills I was learning to new examples, problems or tasks during this activity.

14. This activity required me to think critically about the information being learned or the experience I was gaining during the activity.

15. The content (i.e., topics, examples, or hands-on-experiences) covered in this self-development activity directly aligned with my job knowledge or skill development goals.

16. This activity targeted the job performance areas in which I needed improvement.

17. The job knowledge or skills in which my supervisor indicated I needed to improve were addressed during this activity.

18. I had to invest a large amount of thought and personal effort to successfully complete this self development activity.

19. I found this to be a difficult activity.

20. This activity was mentally demanding.

21. This self development activity provided me with specific information concerning my progress in developing the skill or knowledge targeted in the activity.

22. This activity provided me with information or feedback regarding my success in learning the content or accomplishing the hands-on experiences of the activity.

23. This activity provided me with opportunities to evaluate the extent to which I was achieving my performance improvement/development goals.

Performance Measure

24. Performance:

Please write in your personal sales volume for the last month. _____

Please write in your [team's] sales volume for the last month. _____

Self-Development Coding Scheme Dimensions

Content relevancy – the degree to which the instructional content of the leader self-development activity aligns with or directly addresses specific developmental needs. In this case, a self-development activity that targets one of the leadership processes described above (Fleishman et al, 1991) would be considered more content relevant than an activity that addresses a different need.

Learner engagement – allows the learner to be cognitively engaged in the self-development activity. Encompasses the sub-dimensions of practice (where responses from the self-developer are required) and progress evaluation information (an activity that allows for information about the self-developer's progress and mastery level of a targeted goal).

Challenge – the degree to which a self-development activity requires high cognitive demands to complete the activity. Challenge involves facing novel or ambiguous situations that stretch them beyond current capabilities and ways of thinking.

Learner control – the degree to which a self-development activity imposes the content to be learned and the learning objectives at a strict pace and sequence. Activities that allow for more learner control require more control to be exerted from the self-developer to meet stated goals.

Experiential variety - the degree to which the collection of self-development activities completed by the leader involves activities that are qualitatively different from one another versus activities that are qualitatively the same.

Example Learning Contract

Mother's Maiden Name: Nelson

Target Skill: Improve Interviewing Skills

What are you going to learn (Objectives)?	How are you going to learn it (Resources & Strategies)?	Target Date for Completion	How are you going to know that you learned it (Evidence)?
<p>To become more relaxed when on an interview</p>	<p>By engaging in role-playing with supervisors and co-workers</p> <ul style="list-style-type: none"> - Before engaging in role playing will read books that provide interview tips and think about potential questions - Will approach 5 co-workers and 2 supervisors and ask them to engage in role-playing - Sit down and get feedback from co-workers/supervisors 	<p>November 15th</p> <p>November 20th</p> <p>November 23rd</p>	<p>By own self-assessment</p> <p>By responses given by co-workers and supervisors</p> <p>By behavior and outcome of next interview</p>

Blank Learning Contract

(Adaptive Thinking Condition Instructions) Remember to think of at least three different ways that you are going to accomplish your learning objective. You may have one main learning objective, but there are always several ways to reach one objective.

Mother's Maiden Name:

Target Skill:

What are you going to learn (Objectives)?	How are you going to learn it (Resources & Strategies)?	*What unique aspect does that strategy provide?	Target Date for Completion	How are you going to know that you learned it (Evidence)?

* Adaptive Thinking Condition only

Appendix D

Additional Information Concerning the Impact of Empowerment

Empowerment and Empowering Leadership

Empowerment Defined

Empowerment is an act by which individuals' beliefs regarding their own effectiveness is strengthened and altered (Conger, 1989), resulting in a motivational change (Thomas & Velthouse, 1990). A commonly accepted definition of empowerment involves four cognitions - empowered individuals should be self-efficacious regarding their work (competence), feel that they make a difference (impact), place a high weight on their tasks and roles (meaningfulness), and have feelings of autonomy (choice) (Spreitzer, 1995; 1996).

Mathieu, Gilson and Ruddy (2006), who examined empowerment at the team level (cf., (Kirkman & Rosen, 1999; Kirkman, Rosen, Tesluk, & Gibson, 2004), also delineated structural from psychological empowerment. The structural approach defines empowerment in terms of "a set of practices that involves the delegation of authority and responsibility to employees" (p. 97), and focuses on factors such as work design and job characteristics. The psychological form of empowerment is defined in terms of cognitions and embraces the four dimensions described above. In their paper, Mathieu et al. demonstrated that structural empowerment leads to psychological empowerment which impacts team effectiveness.

In the current research, Spreitzer's (1995, 1996) four empowered cognitions are proposed as consequences to an empowering process introduced by leaders (i.e., structural empowerment). Empowering leader behaviors encourage their subordinates to lead themselves (Cox, Pearce, & Sims, 2003) and are defined by the behavioral dimensions of enhancing meaningfulness of work; fostering participation in decision-making; expressing confidence in high performance; providing autonomy from bureaucratic restraints; and facilitating accomplishment of goals (Ahearne, 2000; Hui, 1994). The concept of empowering leadership is akin to the idea of SuperLeadership (Manz & Sims, 1991). SuperLeadership has been defined as a follower-centric approach to leadership, where "external leadership provides a spark and supports the flame of the true inner leadership that dwells within each person" (Manz & Sims, 1991, p. 18). This creation of an environment where followers have the necessary skills and tools to lead themselves (Cox, et al, 2003) is what differentiates empowering leadership from other similar leadership theories such as "charismatic," "transformational," "visionary" and "inspirational" leadership. By encouraging self-leadership, followers begin to intrinsically value the tasks and work in which they engage because they now possess ownership of their work (Manz & Sims, 1991).

The relationship between empowering leader behaviors and empowered cognitions has not been explicated in many studies. Thomas and Velthouse (1990) theorized that leadership would contribute to feelings of empowerment on the part of the employees. Two dissertations (Ahearne, 2000; Hui, 1994) have tested, and found support for, empowering leader behaviors (defined by the five dimensions listed above) contributing to empowered cognitions. Therefore, it is proposed that if leaders are engaging in empowering behaviors, employees should experience change in certain cognitions, which in turn will manifest itself in behavioral terms. The specific behavior examined in this research is leader self-development activities.

Importance of Empowerment to Leader Self-Development

Research has demonstrated that these psychological perceptions of empowerment have behavioral consequences that can be linked to self-development. First, Thomas and Velthouse (1990) theorized that if these four task cognitions are present, behavioral changes in the form of activity, concentration, initiative, resiliency and flexibility will result. Similarly, Conger and Kanungo (1998) listed behavioral initiation and persistence of task objectives as an outcome of empowerment. These behaviors can be linked to the learner engagement attribute of quality leader self-development activities.

There are several avenues through which empowering leadership behaviors have the potential to influence employee engagement in leader self-development activities, all of which combine to produce followers that take responsibility for their own work. First, through empowering leadership processes, followers become self-leaders and begin to engage in the self-management of their daily work (Cox, et al., 2003). Self-management implies that they are setting their own objectives and goals and taking action to reach these goals (Shipper & Manz, 1992). This self-management should induce a self-regulation system within individuals, and will also lead empowered individuals to intrinsically value the goals towards which they are striving. Such actions are reminiscent of the definition of self-development given above. All of the dimensions of empowering leadership should encourage employees to intrinsically value their work and become self-leaders, two conditions that seem necessary for engagement in effective leader self-development. The relationship between empowering leader behaviors and a feeling of self-leadership makes this construct especially relevant to the prediction of *leader* self-development activities and may not have an impact when discussing general self-development.

Hence, empowering leadership behaviors are linked to leader self-development by encouraging self-leadership, influencing goals and self-regulation processes, and increasing the intrinsic motivation within employees. These behaviors are necessary but not sufficient conditions for employees to engage in leader self-development activities; the missing link is that followers need to gear their felt empowerment specifically towards being active producers of their own learning. This last part in linking empowering leadership and self-development can come from the idea that management support has been found to be an important predictor of participation in self-development

(e.g., Birdi et al., 1997; Maurer & Tarulli, 1994). Since empowering leaders are characterized by facilitating goal accomplishment and performance, such behaviors are likely seen as supportive by their employees. Also, Yun, Faraj, and Sims (2005) found that empowering leaders more often provided subordinates with learning opportunities compared to directive leaders; this study demonstrates the link between empowerment and learning, which is an important part of leader self-development.

Therefore, even though the relationship between empowering leadership and participation in effective leader self-development has never been tested, the theoretical rationale is present for a relationship to exist. Empowering leader behaviors are also proposed to impact the cognitions of their followers. Because empowering leaders instill a sense of autonomy, confidence and intrinsic motivation in their followers, the followers will be more likely to take on challenging tasks, including more challenging self-development activities. Employees who are influenced by empowering leader behaviors are also more likely to intrinsically value the tasks that they are doing, hence leading to more learner engagement during leader self-development activities. Finally, the instilled sense of autonomy by empowering leaders should lead employees to take on less structured tasks where they have more control over the developmental task in which they are engaging. Thus, based on this literature, I make the following propositions:

Proposition 1: Perceived empowering leadership behaviors are positively related to the quantity of leader self-development activities.

Proposition 2: Employee felt empowerment partially mediates the relationship between perceived empowering leadership behaviors and the quantity of leader self-development activities.

Proposition 3: Perceived empowering leadership behaviors have a positive relationship with the a) learner engagement and b) challenge and c) learner control present in leader self-development activities.

Proposition 4: Employee felt empowerment partially mediates the relationships between perceived empowering leadership behaviors and learner engagement.

A Comparison of Empowering and Consideration Styles of Leadership

The leadership literature is ripe with theorizing about how various styles of leadership impact employee behavior. Because of the relationships explicated above, this proposal has elected to focus on how the style of empowering leadership impacts employee leader self-development behaviors; however, for comparison purposes, this proposal will also examine another leadership style, specifically consideration style of leadership. Leader consideration behaviors foster a climate of psychological support (House, Filley, & Gujarati, 1971) by being friendly, treating group members as equals and consulting the group on decisions and actions (Stogdill, 1963). These behaviors produce leader-follower relationships characterized by mutual trust and respect and have been found to be related to follower role satisfaction (House et al, 1971) as well as to follower task motivation (Tjosvold, 1984). Due to the ability of consideration leader behaviors to foster this climate where employees would feel psychological safe and

respected, it is possible for these types of behaviors to impact the leader self-development activities of followers, given that engagement in leader self-development activities requires employees to feel that psychologically able to engage in those behaviors. It is the hypothesis of this proposal, however, that leader empowering behaviors are a stronger predictor of leader self-development behaviors, and consideration behaviors is being used to illustrate this predictive ability of leader empowering behaviors. Therefore, I make the following proposition regarding these differing styles of leadership:

Proposition 5: Empowering leader behaviors predict the quantity of leader self-development activities above and beyond consideration leader behaviors.

Given that performance depends on both motivation and ability, it is proposed that self-regulation and self-appraisal also interact with the empowerment variables.

Proposition 6: Self-appraisal skills and felt empowerment interact to predict learner engagement such that the relationship is stronger for employees who possess stronger self-appraisal skills.

Proposition 7: Self-regulation skills and felt empowerment interact to predict a) learner engagement and b) challenge such that the relationships are stronger for employees who possess stronger self-regulation skills.

Proposition 8: Self-appraisal skills and leader empowering behaviors interact to predict a) content relevancy and b) learner engagement such that the relationships are stronger for employees who possess stronger self-appraisal skills.

Proposition 9: Self-regulation skills and leader empowering behaviors interact to predict a) content relevancy, b) learner engagement, and c) challenge such that the relationships are stronger for employees who possess stronger self-regulation skills.

Measurement Strategy

Empowering leadership measure. Empowering leadership behaviors were measured by a scale developed by Hui (1994) and used and adapted by both Ahearne (2000) and Ahearne, et al. (2005). This measure consists of a total of 10 items that assess four subscales of leader behavior: Enhancing Meaningfulness of Work (three items); Fostering Opportunities for Participation in Decision Making (two items); Expressing Confidence in High Performance (two items); Providing Autonomy from Bureaucratic Constraints (3 items). This measure was completed by the individual consultants and answered on a 7-point scale (1 = Strongly Disagree to 7 = Strongly Agree).

Because the participants in the current study are all self-employed and do not have a direct supervisor or leader that they report to, modified instructions needed to be presented. For this measure (and in all cases where an external leader is the focus of attention) participants were instructed to think of their team leader when responding to the questions. In most cases this team leader was likely at the NVP level, however, that may not have always been the case.

Empowered cognitions measure. Once employees are empowered, they should demonstrate certain cognitions; namely empowered employees should be self-determined and competent, believe that their work is meaningful, and that they have an impact with their work (Spreitzer, 1995). The measure used to assess these characteristics was developed by Spreitzer and has been used multiple times in past research. This measure consisted of a total of 12 items, with multiple items used to assess each of the characteristics mentioned here. This measure was completed by the individual consultants and answered on a 7-point scale (1 = Strongly Disagree to 7 = Strongly Agree).

Leader consideration measure. Leader consideration style of leadership was measured by the scale developed by Stogdill (1963). It contained 10 items, and asked the participants to think about how frequently their team leader engages in the behavior described by the item (1 = Always to 5 = Never). For example, items ask the participants to think about how frequently their leader “gives advance notices of changes” or “acts without consulting the group” (reverse coded).

Results related to Empowerment

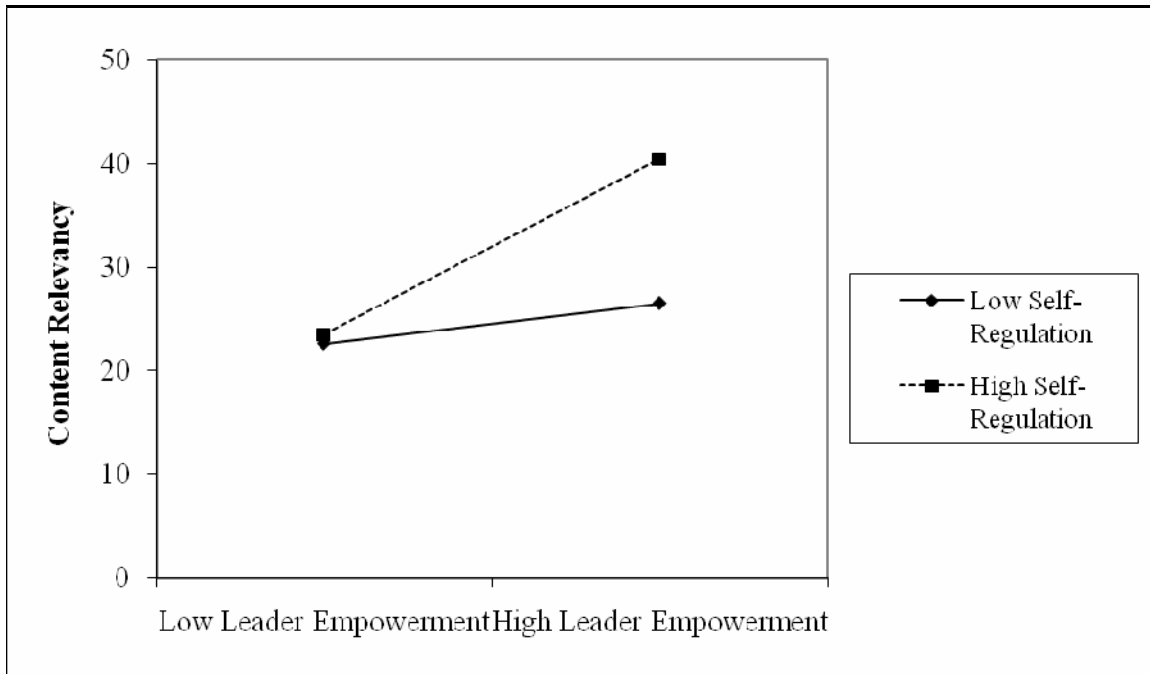
Proposition 9a was the only proposition supported by the data. A significant interaction between self-regulation skills and leader empowering behaviors predicts content relevancy ($\Delta R^2 = .04, p < .05$). The table below shows the results from the moderated regression, and the figure illustrates the nature of the interaction. The graph indicates that the content relevancy involved in leader self-development activities is greatest at high levels of self-regulation and leader empowering behaviors.

Moderated Regression Analyses Predicting Content Relevancy from Leader Empowering Behaviors and Self-Regulation

<i>Model</i>	β	Se B
<u>Predicting Content Relevancy</u>		
STEP 1		
Leader Empowering Behaviors	.01	.29
Self-Regulation	.06	.33
R^2	.01	
STEP 2		
LEB*Self-Regulation	.21	.35
ΔR^2	.04*	

NOTE: LEB = leader empowering behaviors * $p < .05$

Predicting Content Relevancy from Leader Empowering Behaviors and Self-Regulation



Appendix E – Dissertation Proposal December 2006

A Longitudinal Examination of the Quality of Leader Self-Development

The dynamism of today's work environment requires that employees continually develop and learn new skills. Employees must be able to transfer what they learn in training to the actual work environment, as well as have the ability to apply the skills that they learned to another task domain, even if that domain is not exactly the same as the one for which the training was intended to be used. In such an environment, formal company training can not be conducted for every skill-domain combination. As a result, workers must take some of the responsibility for their own skill development. This, in turn, requires workers to determine which skills are lacking and how best to develop them. In other words, it has become necessary for employees to engage in effective self-development in order to keep up with the fast pace of their organizations and the surrounding world.

One specific skill-set that employees must develop on their own (at least in part) is that of leadership. According to Day and Halpin (2004), many organizations are transforming into flatter structures to develop the flexibility needed to keep up with the dynamic environment in which they must compete. These flatter, more complex organizations require that leaders exist in every node of the organization. This premise of all employees becoming leaders is evident in the notion of distributed leadership, where leadership functions are split up among team members. With distributed leadership, teams have a better chance of pushing through adaptive, non-routine challenges that they so often face (Day, Gronn, & Salas, 2004). Therefore, "all organizational members need to be leaders" to some degree (Day & Halpin, 2004, p. 4). However, because of a more dynamic work environment, it is extremely difficult to identify the particular skills that each of these leaders needs for the present and for the future (Hall, 1986). Because of the idiosyncratic nature of these needs, each employee must take some of the responsibility for the development of a leader self. Understanding how this development takes place may be one of the best ways to cope with and succeed in the dynamic work environment (Halpern, 2004).

As the need for employees to engage in effective leader self-development has become more and more pervasive, there has been an increase in the demand for empirical research that helps us to understand the factors that influence employees' engagement in effective leader self-development. The purpose of this dissertation is to examine such factors. Specifically the focus will be on three sets of predictors: organizational support factors in the form of external leader behaviors; individual motivational factors mainly in the form of self-identity; and learning tools that guide employees during the process of leader self-development by giving rise to certain skill-sets. The overarching thesis of this dissertation is that certain environmental factors and individual differences will influence

both employee engagement in leader self-development activities and their success in performing these activities. This dissertation not only examines antecedents, but also asserts that engagement in high quality leader self-development activities has a positive impact on essential outcomes associated with leader effectiveness (namely performance and adaptive thinking skills).

It is important to note that this dissertation examines the phenomenon of *leader* development, not *leadership* development. Leader development is concerned with the personal development that occurs to enhance one's effectiveness in his or her leadership roles and occurs through the training of intrapersonal skills; it is a building up of human capital within organizations (Day, 2000). Conversely, leadership development is a social process that involves developing leadership capacities in collective entities by focusing on interpersonal skills; for example, leader development focuses on developing the skill of self-awareness whereas leadership development focuses on building skills such as social awareness (Day, 2000; Van Velsor & McCauley, 2004). Leadership development involves an examination of the interaction between individuals and the surrounding organizational environments and is a property of effective systems design (Salancik, Calder, Rowland, Leblebici, & Conway, 1975, as cited in Day, 2000). Therefore, the focus of this research is on discerning the factors that have an impact on the personal skill development of individuals in their quest to enhance their leader ability.

The variables to be examined in this dissertation are intended to be consistent with five elements of individual development put forth by McCauley and Hezlett (2002). In their discussion, they identify three lenses of individual development – behavior change, adult development, and self-directed learning (or self-development). Even though all three of these views on individual development have slightly different perspectives on how development occurs within individuals, five common elements of individual development exist between the three lenses. These five elements are 1) self-efficacy for learning, 2) new experiences, 3) awareness of developmental needs, 4) examination of the self in terms of experiences, and 5) valuing of individual development. McCauley and Hezlett discuss how various developmental practices (e.g., 360-degree feedback, executive coaching) cultivate each of the five common elements. They also discuss how each of the elements is manifested in the three different views of individual development. For example, within the self-development context, they state that awareness of developmental needs arises out of seeing that a gap exists between skills needed for one's current job and future job requirements. However, McCauley and Hezlett do not delineate the mechanisms that trigger each of these elements to occur within an individual (e.g., what is the mechanism that causes an individual to be aware of a gap in skills?). This proposal will focus on antecedent variables of each of these elements within individuals engaging in leader self-development activities; the variables that trigger the manifestation of the five elements will be either a contextual or individual-level motivational factor.

The first set of variables to be examined within this proposal is external leader behaviors, specifically leader modeling behavior and empowering leadership. One of the

main tenets of the theory of empowering leadership is that leaders who empower their employees do so partially through an increase in self-efficacy (element one) (Thomas & Velthouse, 1990). An empowering leader should also provide autonomy for his or her subordinates, such that they are forced to engage in new experiences (element two). Leader modeling behavior should also impact engagement in new experiences to the extent that followers observe their leaders engaging in leader self-development activities; such observation should spur the followers to try the same activities that the leaders are engaging in. One more developmental element that empowering leadership should have an effect on is the value that employees place on their development. Through the autonomy and self-leadership that empowering leaders provide, empowered employees begin to intrinsically value their work (Manz & Sims, 1991); this intrinsic value, coupled with support for developmental endeavors offered by empowered leaders, should contribute to employees valuing their individual development. Thus, empowering leaders have the ability to impact the first two elements of development (self-efficacy and new experiences) and the last (valuing of individual development).

Another variable that this proposal will examine in conjunction with leader self-development is self-identity. It is proposed that one's self-identity has the potential to impact three of the elements of development listed above, namely new experiences, awareness of developmental needs, and valuing development. According to McCauley and Hezlett (2002), new experiences originate from a change within the organization that creates a gap between job requirements and current skills. It is proposed here that this gap can also originate from within the self, specifically from a change in identity, such that an employee realizes that his or her skills are not sufficient enough to move up within an organization and become a leader. If employees feel that they do not have the necessary skills to advance within an organization but are motivated to do so, new experiences will be sought to grow the needed leadership skills. This change in identity will not only require the individual to seek out new experiences but also make him or her more aware of the skills that need to be developed (element three). Finally, to the extent that a strong self-identity is present in an individual, developmental experiences will be valued as a means of preserving that identity.

One final variable to be examined within this proposal is training. When training is geared towards helping employees learn how to engage in effective leader self-development (as it is in this proposal) then it must include a component that allows individuals to become aware of their developmental needs (element three). Similarly, such training also requires employees to examine their selves and their behaviors (element four) to be effective.

A combination of all of these factors should not only influence whether or not individuals engage in leader self-development but also the quality of the self-development in which they engage. First, empowered employees are defined as those that are self-determined and competent and also feel that their work is meaningful and that they have impact within the company (Spreitzer, 1995; Thomas & Velthouse, 1990). The

result of examining a composite of all these factors is an individual who not only feels autonomous in his or her work (a factor that gives one the structural ability to engage in self-development), but also feels intrinsically motivated to keep doing the work that he or she is involved in for a specific organization. These feelings, coupled with cognitions of an individual that demonstrates a want for leadership within a specific organization, indicate that he or she will strive to develop the necessary skills to move-up within that organization. Therefore, the leader self-development activities of a person who is empowered and possesses a strong leader self-identity should be more frequent and also be of higher quality than a person who feels empowered to a lesser degree and less of a desire to become a leader.

This proposal asserts that both individual and situational factors contribute to employee engagement in effective leader self-development activities (see Figure 1 for proposed model). It does so by examining the relationships and interactions between variables impacting the five elements of individual development highlighted by McCauley and Hezlett (2002). One of the unique factors in the proposed model that demands highlighting are external leader behaviors behaviors, specifically empowering leadership and leader modeling behaviors. Although leaders are an influential part of the organizational environment, there has not been research to demonstrate the specific impact that leaders have on their followers' self-development activities. There are, however, reasons to believe that this link exists. Much of the research on leadership has been in pursuit of how leaders influence organizational effectiveness, often times defined in terms task performance (Yukl, 2002); there has also been more recent work examining the relationship between transformational leadership and organizational citizenship behaviors, or more contextual, prosocial performance (e.g., Fuller, Patterson, Hester, & Stringer, 1996; Judge & Piccolo, 2004). This work connecting specific leader behaviors and more prosocial employee behaviors is instrumental in linking external leadership and leader self-development activities. While prosocial behaviors are not required by an organization, they can have favorable effects on organizational functioning; therefore, leader self-development, in which employees are voluntarily working to gain skills to help better their task performance, is termed a prosocial behavior (Brief & Motowidlo, 1986; McEnrue, 1989). The previous work that has demonstrated a relationship between specific leader behaviors and one form of prosocial behavior (i.e., organizational citizenship behaviors) provides evidence that such a relationship could also exist between leader behaviors and other prosocial behaviors, specifically leader self-development activities.

This dissertation will also attempt to examine the quality of leader self-development activities. McCauley and Hezlett (2002) highlight content of employee learning as a construct that is in need of much research. Certain kinds of developmental activities are more likely to lead to individual growth and development than others, and this distinction must be made. Therefore, this research will not only examine what factors influence employee engagement in leader self-development but how those factors influence the content and quality of their self-development activities. Specifically, quality

of leader self-development activities is impacted by four instructional design attributes delineated by Orvis (2007): content relevancy, learner engagement (including sub-dimensions of practice and progress evaluation information), challenge, and structure. These four elements describe the activity in which the self-developer participates and can be relevant to the self-development of any skill-set. This dissertation also includes a fifth dimension of quality that has specific implications for *leader* self-development: diversity of self-development activities. This additional attribute of quality is not applicable if examining general skill development but is a necessity when examining the development of adaptive thinking skills. In order to be effective, leaders must have a large repertoire of experiences and abilities to draw upon when handling the complex situations inherent to leadership (Day & O'Connor, 2003), highlighting the need to be adaptive in their thinking. Therefore, self-development activities that promote this skill are essential to developing effective leaders.

Self-developers have direct control over these five elements of quality, and are therefore inherently choosing the degree to which he or she will actually influence the targeted skill-set; in other words, individuals engaging in leader self-development activities have control over how effectively they develop their targeted leadership skills. It is for that reason that the study of quality is so essential. These five attributes will be examined in greater detail in the following sections.

This proposal examines leader development from a life-long perspective. The implication is that a leader is never done learning; the longer one spends as a leader and the more one progresses to higher levels of leadership, the more complex the operating environment becomes, indicating the necessity for an ever-present growth in one's leader capacity. Due to this continuous increase in the complexity of the surrounding environment and what one must do to be an effective leader, leader development requires an expansion of one's perspective (termed frame of reference) about the environment and the skills that are needed for effectiveness in that environment (Boyce, Zaccaro, & Wisecarver, unpublished). In order to appropriately adjust behavior to fit in that behavior, one's conceptual representation of how all of the elements in the environment interact must change and expand; in other words, a leader's frame of reference must expand to ensure continual effectiveness. By adopting this perspective of what it means to develop as a leader, it is not difficult to draw a link between engagement in effective leader (self) development and adaptive thinking skills. This relationship will be explicated below.

The next section presents an examination of the current state of the literature on the main variables of interest. I first begin with a discussion of development and self-development in general and then transition to a discussion that focuses specifically on leader self-development. By presenting definitions of both a "leader" and "development," a connection is formed between effective leader self-development activities and adaptive thinking skills. I then transition to a review of the factors that I am proposing as antecedents to leader self-development. I discuss past research on empowerment and leader behaviors (empowering leadership and leader modeling) as well as self-identity

and then offer hypotheses concerning why these variables should influence leader self-development activities above and beyond other leadership styles such as a consideration style of leadership. I finally move to a discussion of certain skills that should influence engagement in effective leader self-development activities and examine how these skills can be trained.

Literature Review

Leader Development and Self-Development

Leader Development Defined

Leader development has been defined as “the expansion of a person’s capacity to be effective in leadership roles and processes” (Van Velsor & McCauley, 2004, p. 2). A few sources have explicated the differences between development and learning (e.g., Maurer, 2002; Van Velsor & Drath, 2004). Specifically, Van Velsor and Drath (2004) discuss development as providing meaning to learning experiences. “Learning takes place within one’s way of framing experience, within some generalized way of making sense of things, whereas development is the evolution and change of the way of making sense itself” (p. 396). From the definitions provided by Van Velsor and colleagues, several implications regarding leader development can be derived. First, leader development involves an increase in one’s leader capacity, indicating that leader development is a large part of leader effectiveness. Second, this increase in capacity results from an expansion of one’s frame of reference, or perspective, on the self and the surrounding environment. Third, an expansion of one’s frame of reference in the leader development sense indicates that one has gained a more complex understanding of what it actually means to be effective at leader processes. This last point is fundamental to creating a distinction between *leader* development and general development of any other specific skill-set. In the latter, individuals can focus on any number of specific skills, however, development is generally geared toward improvement in one specific area (e.g., I want to develop statistical skills). In leader development, there are a multitude of skill-sets and processes that need to be developed (as an example, please see Fleishman, Mumford, Zaccaro, Levin, Korotkin, & Hein, 1991, for a sampling of researched leader behaviors and processes). Because there are many different processes that a leader can and must focus on to be effective, the more that individuals learn about these processes, the larger and more complex their understanding of their own leader capacities will be. In other words, the more one learns about the leader requirements imposed by one’s operating environment to be considered effective, the more one will understand what it means to be a leader and where he or she stands in relation to that standard. It is that needed match between one’s current leader skill-sets and the operating environment that make self-development such an effective tool for leader development.

Leader Self-Development

Self-development is a process that individuals undertake in order to gain knowledge or strengthen a skill-set (Confessore & Kops, 1998). Self-development requires self-developers to take on “the primary responsibility for planning, carrying out,

and evaluating their own learning experiences” (Ellinger, 2004, p. 159). In essence, self-developers decide what skills and knowledge they need to gain and then determine the pathway that best facilitates development in these areas. This development can occur through a number of outlets, including job experiences, seminar courses, or even interpersonal relationships (Noe & Wilk, 1993). No matter the form of the learning, the essential aspect is that it is initiated by the self-developer, indicating that the development venue and content area are not mandated by the organization (Maurer & Tarulli, 1994). By combining the definition of leader development presented above with this definition of self-development, leader self-development can be defined as “a process in which leaders take personal responsibility for initiating, sustaining, and evaluating growth in their own leadership capacities and in their conceptual frames about the conduct of leadership” (Boyce, et al, unpublished).

One of the keys to leader self-development is that individuals set and monitor their own goals. To set goals and monitor their own progress, individuals must be able to recognize where change is actually necessary (London & Smither, 1999); this recognition requires individuals to become more acutely aware of the match between their skills and the surrounding environment. In other words, recognizing a disparity between one’s current skills and the skills needed to successfully operate in the surrounding environment requires an increase in the complexity of one’s frame of reference. By definition, leaders operate in complex environments that involve ill-defined situations and problem-solving (Zaccaro & Klimoski, 2001). Leaders also “motivate, influence and enable individuals to contribute to the objectives of organizations of which they were members” (House, Hanges, Javidan, Dorfman, & Gupta, 2004, p. xxii). Therefore, effective leaders must remain attune to large, complex environments in terms of their needs and the needs of their subordinates; their frames of references must be exceptionally large and complex to handle the plethora of information present. The environment surrounding a leader is continually presenting cues as to what it means to be an effective leader. If leaders attend to these cues in the environment, their frames regarding what it actually means to be a leader should subsequently expand and they should better be able to respond to and direct their subordinates. In other words, by engaging in leader self-development experiences that are meant to result in a more permanent evolution in the way one perceives and makes sense of the environment, one’s notion about his or her own leadership capacity should also expand if these self-development activities are of high quality.

As mentioned, this proposal will examine not only the frequency with which employees engage in self-development, but also the *quality* of the self-development activities. Most research that has focused on self-development has paid attention to the former (e.g., Birdi, Allan, & Warr, 1997; Boyce, 2004; Maurer & Tarulli, 1994; Maurer Weiss, & Barbeite, 2003). A variety of studies have also examined intentions to participate in future self-development activities (e.g., Maurer & Tarulli, 1994; Maurer et al., 2003; McEnrue, 1989). While these are important outcomes when assessing self-development, examining the quality of self-development activities goes a step beyond

frequency; even if employees engage in self-development processes on a daily basis, to the degree these activities are of high quality (encompassing the dimensions of diversity, content-relevancy, learner engagement, challenge, and structure; Orvis, 2007), the more effective the self-developers should be at developing the targeted skills.

Instructional Design Attributes Encompassing Quality

Based on a thorough review of various literatures bases (i.e., instructional design; adult learning and education; training and development), Orvis (2007) has identified several attributes that reflect high quality instruction within a self-development activity. Specifically, she has identified content relevancy, learner engagement (encompassing both practice and progress evaluation information), challenge, and structure as determinants of a high quality activity. Table 1 (adapted from Orvis 2007) defines each of these attributes. Although these attributes have been identified as creating higher quality self-development activities, there is no reason that these attributes should not transfer to the more specific examination of *leader* self-development. The method of defining the content relevancy dimension is especially important to delineating leader self-development from more general self-development. Here content relevancy is defined as the degree to which individuals engage in activities that target skill development in one of the 13 areas defined by Fleishman, et al (1991) in their development of a taxonomy of leader behaviors. Therefore, the more content relevant a described self-development activity is judged to be, the more that activity works to increase one's capacity as a leader.

This proposal also includes a fifth attribute of quality that is specific to leader self-development; specifically, this research also examines diversity of leader self-development activities. A variety of development experiences is essential to the leader development process (Van Velsor & McCauley, 2004). Specifically, this research is proposing that experiential variety is a necessary component of growing adaptive thinking skills within leaders. Therefore, the quality attributes delineated by Orvis (2007) are important for general skill development, and the attribute of diversity of self-development activities is necessary only when focusing on the development of adaptive thinking skills.

Examining the quality of leader self-development activities is extremely important; certain activities may be more developmental than others, and gaining an understanding of the attributes of activities that actually make them developmental is necessary to further the self-development research. When an examination of pure quantity takes place, it is unknown if development is actually occurring. For example, person A may engage in three different leader self-development activities over the course of one month in the hopes of bettering his or her skills in motivating personnel, whereas person B may only engage in one activity to target the same skill. If simply asked how many activities these people engaged in, it would be a reasonable assumption that person A has worked harder to develop his or her motivating skills. The inherent problem with that assumption is that one has to assume that this person has engaged in these activities

to such an extent that his or her personnel development skills are increased without knowing anything about these activities. It could be the case that person A simply read three books on motivating personnel, and person B attended a week-long seminar with hands-on activities and role playing to truly target motivational skills. When examining leader self-development from a quality perspective, it is more evident that person B has a better chance of actually attaining the skills that he or she so desires.

Dissecting the quality of leader self-development activities is also essential to understanding development from the definition put forward earlier. When leader self-development activities are of high quality, it is more likely that the self-developer has a better understanding of what leadership skills need to be developed and the best ways to actually develop those skills. In other words, by examining quality, we can be more confident that the leader self-development activities are actually increasing the complexity of one's frame in regard to leader capacity.

An increase in frame complexity is especially salient when the instructional design attribute of challenge is examined. According to Orvis, one aspect that creates challenge within a self-development activity is novelty. If an activity is novel to the self-developer, the activity itself will be more challenging simply due to the fact that new material is being presented. The more novel material and diversity of experiences that self-developers are exposed to, the more likely it is that they will gain new perspective, hence increasing their frames of reference.

Up until this point, I have discussed the difference between development and learning and applied this distinction to what it means to specifically engage in leader development and self-development. I have also presented research ideas on what it means to engage in high quality leader self-development activities and why this is important. I will now turn to a more detailed examination of past research on self-development. Because of the dearth in the literature surrounding *leader* self-development, insights into the predictors and outcomes of this type of development can be drawn from the more general self-development literature.

Consequences of Self-Development

Self-development is an important activity for employees to undertake. Because of more variability today in people's career patterns and the introduction of new technology, it is necessary that employees take some of the responsibility for their own development (London, Larsen, & Thisted, 1999). One of the ways that organizations can best adapt and compete in evolving markets is to employ personnel who can continuously acquire new skills and talents; self-development fosters specialized skills within self-developers that help the organization get ahead (Maurer, Pierce & Shore, 2002). The essence of self-development is individuals focusing on developing skills that are particularly relevant and important to them; this personalized learning has been demonstrated to be most effective when it comes to adult learning (Knowles, 1975). Therefore, self-development

should be very useful in the growing of leadership skills within employees who have a propensity to be leaders.

As implied, leader self-development not only has benefits for the individual, but can positively influence the organization as well. First, if organizations support the growth of leaders at all levels of the organization, the organization will be more competitive. In specific regard to leader self-development, organizations who support this growth through self-development have found a way to remain competitive without imposing huge training costs upon themselves. Therefore, not surprisingly, it has been found that organizations that have employees who engage in leader self-development are more cost-effective and flexible when it comes to the learning and development of their employees (Ellinger, 2004).

Engagement in leader self-development activities also has the potential to impact individual performance, which in turn, is beneficial to the organization. Employees' participation in quality leader self-development activities should be instrumental to improving performance through both motivational and skill avenues. First, engaging in leader self-development activities implies that there is a motivation present to be a leader and succeed within an organization. Aside from this motivational aspect, effectively partaking in leader self-development activities will also teach employees needed skills to become a leader in the organization, indicating that task performance will improve. When employees target the relevant skills needed for improvement (content relevancy), are engaged in and provided feedback on their development (learner engagement), partake in challenging activities (challenge) that allow them to be a large part of the decisions regarding the developmental activity (structure) and participate in a wide variety of activities (diversity), improved task performance should ensue. Having both the motivation and skills/knowledge to succeed is a large component of performance (Campbell, Gasser, & Oswald, 1996; Campbell, McCloy, Oppler, & Sager, 1993).

Based on the connection between engagement in quality leader self-development activities and performance, I make my first hypothesis regarding leader effectiveness and self-development activities.

Hypothesis 1: Participation in leader self-development activities that a) are more content relevant, b) provide more learner engagement, c) are more challenging, d) are less structured and e) are more diversified lead to improved task performance.

As discussed above, leaders perform and operate in ambiguous, rapidly changing environments. Therefore, one skill that should influence a leader's performance (and be influenced by high quality leader self-development activities) is the skill of adaptive thinking. If an individual's frame of reference is truly expanding during leader self-development activities, this expansion should have an impact on adaptive thinking skills. Adaptability involves being able to effectively change old procedures or patterns of behaviors in accordance with new task or situational demands. People with adaptive

skills recognize what changes in their behaviors and cognitions must occur to be successful in a new situation; adaptive people seek out new solutions to problems instead of continually engaging in the same behaviors. Adaptive experts understand why or why not certain behaviors and ways of thinking are working for them (Smith, Ford, & Kozlowski, 1997). Therefore, adaptive experts possess the necessary cognitive integration skills to create new behaviors and procedures based on the situation at hand. Engaging in experiences where individuals are taught how to modify and integrate their behavior when necessary will lead to a deeper understanding of the self and is hence more effective at producing the desired changes within the self.

Hall (1986) has proposed that adaptive people have experienced change within their work environment and thus have been subject to a variety of experiences. Also, by engaging in a variety of developmental experiences, individuals should learn different lessons from the varying experiences (Van Velsor & McCauley, 2004); self-developers are necessarily exposed to a variety of perspectives and should gain a deeper understanding about themselves and the skill-set attempting to be developed. Therefore, as noted earlier, diversity of leader self-development activities is essential for the growing of adaptive thinking skills. Experiential diversity is more likely to increase one's frame of reference in regard to the self and the skill being developed, consequentially increasing one's adaptive thinking skills.

Challenge, another attribute of quality leader self-development activities is also likely to contribute to adaptive thinking skills. Involvement in challenging leader self-development activities should increase adaptive thinking skills by moving individuals out of their "comfort zones" and into challenging activities to grow their leader selves. By engaging in leader self-development activities in challenging environments, self-developers are required to produce responses and engage in actions that are necessary for development (Van Velsor & McCauley, 2004). Because leader self-development involves initiation of developmental activities on one's own, the more willing a person is to make those activities challenging and new, the more likely it is that he or she will truly understand and target the skills that need to be improved. From this discussion, I make my second set of hypotheses.

Hypothesis 2a: The leader self-development quality dimensions of a) challenge and b) diversity lead to higher adaptive thinking skills.

Hypothesis 2b: Adaptive thinking skills partially mediate the relationship between task performance and both a) challenge and b) diversity.

These hypotheses indicate that employee engagement in leader self-development activities is helpful to organizational and personal growth. Therefore, I will now turn to a discussion of past research on the antecedents to self-development. Because there is very little research on the specific case of leader self-development, some of the antecedents discussed will be in regard to general self-development in the hope of drawing insights into leader self-development. Also, in order to obtain a full picture of self-development, it

is also necessary to draw on the general individual development literature. McCauley and Hezlett (2002) have classified self-development as one of the three general lenses through which to understand individual development; because these three lenses have common elements, the general development literature will also provide some beneficial insights into leader self-development.

Antecedents of Self-Development

From the literature, the main conclusion that can be drawn about engagement in self-development activities is that it is a function of both the environment and the individual; most studies on self-development, however, have mainly focused on the latter.

Individual Difference Variables

Many different variables have been examined in relation to engagement (or intentions to engage in) self-development activities. The individual difference variables seem to fall into the categories of non-motivation based and motivation based. Within the latter, however, there are those also those variables that link motivation to learning and those that do not. Within the non-motivational based variables, several antecedents to engaging in developmental activities have been identified. One of these is age, in which the literature has demonstrated that younger employees are more likely to engage in self-development activities (e.g., London et al., 1999; McEnrue, 1989). Another related variable is tenure; Noe and Wilk (1993) demonstrated that managers (i.e., those who have been with the company longer) are more likely to engage in developmental activities than non-managers.

Within the motivation-based category, several antecedents have been studied and identified. Organizational commitment, which is a widely studied construct in the organizational literature, has been found to be a significant predictor of willingness to engage in self-development activities (McEnrue, 1989). Interestingly, organizational commitment has also been theorized to be an outcome of engaging in self-development (Maurer, et al., 2003). Another similar construct that has been found to be a significant predictor of self-development participation is job involvement (Maurer & Tarulli, 1994). Boyce (2004) also found evidence for a work orientation variable composed of career motivation, job involvement and organizational commitment significantly influencing one's propensity to engage in leader self-development activities indirectly through one's motivation to engage in leader self-development activities.

Within the motivation-based antecedents, a subset of variables exists that deals directly with learning motivation. In general, motivation to learn has been found to be a significant predictor of engagement in development activity (Noe & Wilk, 1993). More specific than a general motivation to learn is what London and colleagues have termed "career motivation." London et al. (1999) defined career motivation in terms of "resilience and self-esteem to overcome career barriers and adapt to changing circumstances, the insight to be realistic about oneself and one's career, and the extent to which one's identity is tied to career goals and accomplishments" (p. 10-11). Part of

career motivation is career insight, which has been found to have a significant relationship with developmental participation (e.g., Maurer & Tarulli, 1994). Maurer (2002) defines career insight as facilitating the idea that development and learning are relevant to the self by providing a person with knowledge about him or herself in relation to career goals. Career insight helps a person to realize that there is a gap between his or her actual and possible selves (to be discussed later). Both of these variables associate a motivation to learn with using learning and development to further one's career; this line of thinking can also be found in McEnrue (1989) where he details self-development as a "career management strategy," indicating that self-development activities can be used as a means to succeed in one's career. Thinking of self-development as a career management strategy is particularly relevant to leader self-development, in that individuals who engage in self-development to grow their leader selves are attempting to further their career.

Along similar lines of career motivation and insight is the role that individual values play in self-development participation. Maurer and colleagues have demonstrated that individual values interact with other predictors such as supervisor support when attempting to explain self-development participation (Maurer et al., 2002; Maurer & Tarulli, 1994). These results indicate that it is important to know what employees value in a job before attempting to identify what will impact their self-development participation. For example, if within their career, it is important for individuals to move up the ladder in an organization and become a vice president, then those people are more likely to engage in leader self-development activities to further this career goal. Once again, engagement in leader self-development activities is partially dependent upon the career goals that people hold.

The constructs of career motivation, career insight and individual values all indicate that employees not only need to be motivated to engage in self-development as a means to accomplishing career goals but also need to have sufficient knowledge of where one stands in relation to those goals; in other words, a person needs to be sufficiently motivated to engage in self-development activities but also needs to recognize what areas need improvement. All of these variables can be summed up in what Maurer (2002) terms an Employee Learning and Development Orientation (ELDO). According to Maurer, an ELDO is a motivational state that is dependent upon how personally relevant learning and development are to the self. An ELDO is based upon behavior, affect, and perhaps most importantly, cognitions about the self. This concept (along with the other more specific constructs described above) is closely associated with a person's identity, a concept to be elaborated on below.

Situational Variables

Aside from individual difference variables, the literature has paid some heed to contextual factors that may impact employee participation in self-development activities. Employee engagement in self-development activities is also a function of the organizational environment. Given that engagement in self-development partially

depends on motivational differences that are malleable (e.g., self-efficacy), the organization can provide an environment that facilitates such feelings (McCauley & Hezlett, 2002). An overarching concept when discussing contextual factors is that of a learning organization (Confessore & Kops, 1998). According to Confessore and Kops, “a key characteristic of the learning organization is the ability of its members to find or make opportunities to learn from whatever resource or situation is available” (p. 365); in turn, the organization as a whole gains knowledge from individual learning. Confessore and Kops propose that learning organizations and self-directed learning have reciprocal relationships with one another such that the environment encourages self-development, and employee engagement in self-development influences the climate of the organization. Learning organizations provide the back-drop for individuals to develop over time by encouraging and supporting the acquisition and application of new skills (London & Mone, 1999). The design of challenging jobs in learning organizations not only supports employee development, but is particularly conducive to leader self-development; in dynamic challenging situations, leadership skills are likely to be developed due to the more ambiguous nature of the environment. Because a learning organization also provides the needed resources to engage in development, *self*-development is more likely to occur because employees will feel supported and capable of engaging in self-learning.

The influence of the environment on individual learning and development activities highlights the importance of a supportive environment in self-development. McCauley (2001) proposed three aspects of the organizational context that are important for individual development: 1) “a leadership development strategy with a strong link to the organization’s business goals and strategy,” 2) “human resource management practices that support development,” and 3) “organizational culture that reinforces the importance of learning” (p. 370). Within the employee development literature, specific examples of these aspects have been identified. Within an organization, support for learning and development can manifest itself through feedback and performance appraisals (London et al., 1999; Maurer, 2002). More generally, company policies that support self-development have also been found to be a strong predictor of engagement in self-development activities (Maurer & Tarulli, 1994). Boyce (2004) demonstrated that organizational support moderates the relationship between one’s propensity to engage in leader self-development activities and actual engagement in leader self-development activities; organizational support seems to be most influential for employees who have a low to moderate propensity to engage in leader self-development activities. Perceived support from management has also been shown to be an important predictor (e.g., Birdi, et al., 1997; Maurer & Tarulli, 1994; Noe & Wilk, 1993). These findings indicate that one way to facilitate engagement in self-development activities is through organizational leadership. Such a relationship, though, has been understudied in the literature and does not currently expand much beyond linking supportive management to participation in developmental activities and does not look at specific leader behaviors or the influence that leaders have on their followers. It is thought that leaders have the ability to influence some of the other individual difference variables that were discussed above. For example, it has been found that leaders can influence employee organizational commitment (e.g.,

Bycio, Hackett, & Allen, 1995; Kacmar, Carlson, & Brymer, 1999; Luthans, Baack, & Taylor, 1987); in such a case, leader behaviors would be an indirect influence on employee leader self-development activities. Therefore, this research proposes to go beyond the general link of supportive management and test how specific leader behaviors) influence employee engagement in leader self-development activities.

I now turn to a discussion of the theory of empowering leadership and how such leader behaviors can impact participation in and quality of leader self-development activities. In this proposal, empowering leadership is theorized to indirectly contribute to employee engagement in effective leader self-development. This section will also contain a discussion on leaders who exhibit a consideration style of leadership. This type of leadership is presented for comparison purposes with empowering leadership and serves to illustrate the importance of empowering leadership. The importance of external leader modeling behaviors to employee leader self-development activities will also be discussed.

Empowerment and Empowering Leadership

Empowerment Defined

Empowerment is an act by which individuals' beliefs regarding their own effectiveness is strengthened and altered (Conger, 1989), resulting in a motivational change (Thomas & Velthouse, 1990). When empowerment was defined by Conger and Kanungo (1988) the main component was self-efficacy, indicating that empowerment enabled workers to feel competent in their work performance. Since then, three other task assessments or elements have been added to the definition of empowerment for a total of four dimensions – competence, impact, meaningfulness, and choice – that are designed to be proximal predictors of intrinsic task motivation (Thomas & Velthouse, 1990). Spreitzer (1995, 1996) used these four dimensions to expand upon the definition of empowerment and design a measure based on the four proposed empowered cognitions. Spreitzer's definition specifies that empowered individuals should be self-efficacious regarding their work (competence), feel that they make a difference (impact), place a high weight on their tasks and roles (meaningfulness), and have feelings of autonomy (choice). Numerous other studies have used Spreitzer's definition and measure of empowerment in their own work (e.g., Ahearne, Mathieu, & Rapp, 2005; Alge, Ballinger, Tangirala, & Oakley, 2006; Avolio, Zhu, Koh, & Bhatia, 2004; Laschinger, Finegan, Shamian, & Wilk, 2004). Although these four cognitive states reflect a predominant way to define the cognitions associated with felt empowerment, there are other definitions present. For example, Bowen and Lawler (1992, as cited in London & Smither, 1999) state that empowerment entails information sharing with employees and providing them with the autonomy to make important decisions. London (1993) defines empowerment simply in terms of employees having the authority to do their jobs, autonomy that is complimented by trust and confidence from their supervisors. These alternative definitions, however, do not include components that directly tap into the intrinsic motivation that empowered employees feel. Therefore, the definition that breaks felt

empowerment into four cognitions is the most complete because it goes beyond simple delegation that provides autonomy and speaks to a real cognitive change that occurs within individuals.

Mathieu, Gilson and Ruddy (2006), who examined empowerment at the team level (cf., (Kirkman & Rosen, 1999; Kirkman, Rosen, Tesluk, & Gibson, 2004), applied the construct of empowerment in yet a different way by categorizing the different definitions into either structural or psychological empowerment. The structural approach defines empowerment in terms of “a set of practices that involves the delegation of authority and responsibility to employees” (p. 97), and focuses on factors such as work design and job characteristics. The psychological form of empowerment is defined in terms of cognitions and embraces the four dimensions described above. In their paper, Mathieu et al. demonstrated that structural empowerment leads to psychological empowerment which impacts team effectiveness.

This difference between structural and psychological empowerment speaks to the argument that Spreitzer’s (1995) four empowered cognitions are consequences of more situational (structural) empowerment (Leach, Wall, & Jackson, 2003). Therefore, I am presently examining empowered cognitions as defined by Spreitzer’s (1995) work as resulting from an empowered environment, specifically one that is shaped by leader behaviors. This separation extricates the empowering process (to be described below in terms of leadership) from the outcomes associated with this process.

Empowering Leadership

The notion of empowering leadership transforms the concept of empowerment into an act that resides at the leader-level; it is similar to structural empowerment described above in that it is an external factor that provides employees with feelings of empowerment. Empowering leaders are leaders that encourage their subordinates to lead themselves (Cox, Pearce, & Sims, 2003). The concept of empowering leadership is akin to the idea of SuperLeadership (Manz & Sims, 1991). SuperLeadership has been defined as a follower-centric approach to leadership, where “external leadership provides a spark and supports the flame of the true inner leadership that dwells within each person” (Manz & Sims, 1991, p. 18). Therefore, the main job of the SuperLeader is to provide employees with the support and encouragement, such that they can become self-leaders. Although not specifically stated in their work, Manz and Sims imply that the result of SuperLeadership will be self-leaders who are competent, autonomous and, through the intrinsic value placed on their work, believe that their work has impact and is meaningful; in other words, the result of employees who are led by SuperLeaders is the same as the definition of felt empowerment given here.

Empowering leadership can also be compared to other types of leadership. Other similar leadership theories fall under names such as “charismatic,” “transformational,” “visionary” and “inspirational” leadership; within all of these theories, the leaders transform a social system and influence the needs and values of the subordinates by the subordinates becoming committed to the vision put forth by the leader (Shamir, House, &

Arthur, 1993). When such leadership processes occur, followers experience change in terms of the development of high trust in the leader, a change in their values, and an increased intrinsic motivation to follow the leader's vision (Shamir et al., 1993). All of these leadership theories, as well as empowering leadership theory, differ from more "traditional" views of leadership (e.g., path-goal theory, transactional leadership, functional leadership) because the leader/subordinate relationship is no longer purely transactional in nature. These theories all focus on transforming subordinates in some way that goes beyond a simple exchange relationship.

Transformational/charismatic leaders may place an emphasis on empowering their followers (Avolio, 1999), and such types of leader behaviors have even been found to lead to psychological empowerment within their employees (e.g., Avolio, et al, 2004). The theory of empowering leadership differs, however, in the emphasis that empowering leadership puts on encouraging subordinates to lead themselves; empowering leaders work to create an environment where followers have the necessary skills and tools to lead themselves (Cox, et al, 2003). "The key... is the leader's emphasis on helping followers build habits of work and thought that combine independent initiative and responsible engagement" (Cox et al., 2003, p. 170). With this type of leadership, followers begin to intrinsically value the tasks and work in which they engage because they now possess ownership of their work (Manz & Sims, 1991). Consequently, having employees who intrinsically value the work that they are doing should have benefits for the organization; such consequences are detailed below.

Importance of Empowerment

As stated above, according to Spreitzer (1995), empowerment manifests itself in four cognitions that reflect an individual's orientation toward his or her work role or task at hand: competence, impact, meaning, and self-determination. Research has demonstrated that these psychological perceptions of empowerment have behavioral consequences. First, Thomas and Velthouse (1990) theorized that if these four task cognitions are present, behavioral changes in the form of activity, concentration, initiative, resiliency and flexibility will result. Especially in the flatter, more dynamic organizations of today, these seem to be valuable employee behaviors. Similarly, Conger and Kanungo (1998) listed behavioral initiation and persistence of task objectives as an outcome of empowerment. These theories combine to paint a picture of an empowered worker as someone who initiates tasks on his or her own, and also persists in an effective manner with these tasks even when challenges arise.

Aside from the more specific behaviors described, empowerment has also been shown to have a more general impact on employee behavior and affect toward the organization. In her study of managers, Spreitzer (1995) demonstrated a link between psychological empowerment and innovation and effectiveness within the managers in her sample. Similarly, Koberg, Boss, Senjem, and Goodman (1999) found that empowerment perceptions had a positive relationship with job satisfaction and work

productivity/effectiveness and a negative relationship with propensity to leave the organization.

A few studies (i.e., Laschinger, et al., 2004; Mathieu et al., 2006, Seibert, Silver, & Randolph, 2004) have demonstrated the importance of empowerment to employee performance/effectiveness by delineating the relationship between structural empowerment and psychological empowerment. As noted above, Mathieu et al. demonstrated that structural empowerment led to psychological empowerment which impacts team effectiveness. In a similar fashion, but at the individual level of analysis, Laschinger et al also found that psychological empowerment is a mediator between structural empowerment and employee effectiveness. Seibert and colleagues investigated the effects of a group level variable termed empowerment climate and demonstrated that psychological empowerment served as a mediator between the climate variable and individual performance.

These studies are important for several reasons. First, they, along with the other research described above, indicate that empowered employees are not only initiating and persisting in tasks, but they are doing so in an effective manner. The research described also highlights the importance of both the individual and the surrounding contextual factors in the empowerment process. The link between empowerment and important organizational outcomes, such as job satisfaction, turnover and performance, indicates that it is useful for organizations to employ an empowering structure in their organization. However, these studies also implicitly demonstrate that while empowerment may arise from an external source, the individual is left to his or her own devices to use this empowerment to perform in a more effective manner.

Antecedents to Empowerment

There has been some research and theorizing on the variables that contribute to employee felt empowerment; just as with the consequences of empowerment, these antecedents can be grouped into individual and contextual factors. The logic behind the individual factors contributing to empowered cognitions is that certain employees are not ready for or cannot succeed when empowered. For example, Spreitzer (1995), in an attempt to validate a nomological net surrounding empowerment, demonstrated that self-esteem of the employees was positively related to empowered cognitions; those employees with high self-esteem are likely to feel that they are valued within their organization, and thus, are more likely to take advantage of empowerment provided to them by an external source. Also, Spreitzer and Quinn (1996) hypothesized that those people with high self-esteem, positive affect regarding their job, and those employees with more of a need for power would become empowered. As can be seen, certain individual difference variables will impact whether or not employees become empowered. However, in order to impact motivated behavior, the process of empowerment is one such that both the surrounding work context and the individual's personality shape the empowered cognitions that form (Thomas & Velthouse, 1990).

Aside from these individual factors, more contextual issues have been thought to contribute to feelings of empowerment. Thomas and Velthouse (1990) theorized that environmental change interventions such as leadership, delegation, job design and reward systems would contribute to feelings of empowerment on the part of the employees. Notably, these factors seem to have to do more with the structural empowerment described above. Surprisingly, the first of these environmental changes, leadership, seems to be understudied in the literature and, as it is one of the foci of this proposal, will be discussed in more detail below.

One study (Ahearne et al., 2005) found support for an interaction between an individual factor contributing to empowerment (i.e., employee readiness) and the more contextual factor of empowering leader behaviors. Specifically, they demonstrated that leaders exhibiting empowering behaviors had a positive relationship with employee self-efficacy and adaptability. Even more interesting was the moderating effect of employee readiness (i.e., readiness to have the freedom that comes with empowerment) on these relationships, such that the effects of leader empowering behaviors on self-efficacy and adaptability were stronger for those with low readiness. The implication is that those employees who have high self-efficacy and adaptability skills at the outset do not really benefit from leader empowering behaviors as much as workers with weaker skills. This study highlights the idea of leader empowering behaviors being developmental in nature. This finding is especially important to the current proposal given the link that is being made between empowerment and leader self-development.

The Ahearne et al. (2005) study is one of the few to try and directly link empowered cognitions and empowering leadership behaviors. Two dissertations have also tested this relationship. First, Hui (1994) demonstrated that empowering leader behaviors have both a direct and indirect effect on subordinate performance; the indirect effect operates through the empowerment experiences of self-efficacy, voice and personal control. The second dissertation, Ahearne (2000), examined empowering leader behaviors at the team level and hypothesized that empowering leader behaviors would impact the in-role and extra-role team behaviors of salespeople. Both Hui and Ahearne operationalized empowering leader behavior as consisting of five dimensions: enhancing meaningfulness of work; fostering participation in decision-making; expressing confidence in high performance; providing autonomy from bureaucratic restraints; and facilitating accomplishment of goals. Even though empowering leadership has not been studied as a direct link to employee psychological perceptions of empowerment in many studies, it logically makes sense that if leaders are engaging in empowering behaviors, employees should experience change in certain cognitions, which in turn will manifest itself in behavioral terms.

Empowering Leadership and Follower Leader Self-Development

There are several avenues through which empowering leadership behaviors have the potential to influence employee engagement in leader self-development activities, all of which combine to produce followers that take responsibility for their own work. First,

through empowering leadership processes, followers become self-leaders and begin to engage in the self-management of their daily work (Cox, et al., 2003). Self-management implies that they are setting their own objectives and goals and taking action to reach these goals (Shipper & Manz, 1992). Such actions are reminiscent of the definition of self-development given above.

Next, empowering leaders have the potential to impact the goals and self-regulation processes of their followers, both of which are important aspects of engaging in self-development. There has been work relating leadership, specifically charismatic leadership, to goal-setting and regulation of the followers. Cropanzano, James, and Citera (1993) have linked individual values to motivation and behavior through a hierarchical network of goals and tasks. They argue that all tasks are in a hierarchy and that different styles of leadership can impact this hierarchy. Although leaders cannot easily construct the values of their followers, they do serve to activate existing values within their subordinates' goal hierarchies. By activating specific values, these leaders are influencing the internal regulation system of their followers and influencing higher-order cognitions by making certain values more salient (Lord, Brown, & Freiberg, 1999). These more salient goals are the ones that are intrinsically valued, and therefore, the ones that people will be more likely to engage in self-regulation processes to achieve. When looking specifically at empowering leadership, it seems that the superordinate goal that they activate within their followers is the notion of becoming a leader.

The idea of leaders influencing follower goals maps nicely onto the idea of empowering leaders providing followers with the direction needed to lead themselves, hence, teaching their followers self-regulation processes. In general, if people are self-leaders, they must have an internal regulation system to guide their behaviors. Also, empowered followers, due to the self-leading aspect of empowerment, are likely to intrinsically value the goals towards which they are striving. Specifically, empowering leaders enhance the meaningfulness of work for employees, foster participation in decision-making, express confidence in performance, and provide autonomy for their followers (Ahearne, et al., 2005). All of these dimensions of empowering leadership should encourage employees to intrinsically value their work and become self-leaders, two conditions that seem necessary for engagement in effective leader self-development.

Thus far, empowering leadership behaviors have been linked to leader self-development by encouraging self-leadership, influencing goal structures and self-regulation processes, and increasing the intrinsic motivation within employees. These behaviors are necessary but not sufficient conditions for employees to engage in leader self-development activities; the missing link is that followers need to gear their felt empowerment specifically towards being active producers of their own learning. This last part in linking empowering leadership and self-development can come from the idea that management support has been found to be an important predictor of participation in self-development (e.g., Birdi et al., 1997; Maurer & Tarulli, 1994; Noe & Wilk, 1993). Since empowering leaders are characterized by facilitating goal accomplishment and

performance, such behaviors are likely seen as supportive by their employees. According to McCauley (2001), such supportive behaviors will encourage followers to engage in self-development and allow followers to embrace challenges instead of shying away from them; people are more likely to learn when they feel support in doing so. Similarly, Yun, Faraj, and Sims (2005) found that empowering leaders more often provided subordinates with learning opportunities compared to directive leaders; this study demonstrates the link between empowerment and learning, which is an important part of leader self-development.

Therefore, even though the relationship between empowering leadership and participation in effective leader self-development has never been tested, the theoretical rationale is present for a relationship to exist. Empowering leader behaviors are also proposed to impact the cognitions of their followers. Because empowering leaders instill a sense of autonomy, confidence and intrinsic motivation in their followers, the followers will be more likely to take on challenging tasks, a behavior that should lead to engagement in more effective leader self-development activities. Employees who are influenced by empowering leader behaviors are also more likely to intrinsically value the tasks that they are doing, hence leading to more learner engagement during leader self-development activities. Finally, the instilled sense of autonomy by empowering leaders should lead employees to take on less structured tasks where they have more control over the developmental task in which they are engaging. Thus, based on this literature, I propose my next set of hypotheses:

Hypothesis 3a: Perceived empowering leadership behaviors are positively related to the quantity of leader self-development activities.

Hypothesis 3b: Employee felt empowerment partially mediates the relationship between perceived empowering leadership behaviors and the quantity of leader self-development activities.

Hypothesis 4a: Perceived empowering leadership behaviors have a positive relationship with the a) learner engagement and b) challenge of leader self-development activities and have a negative relationship with c) the structure of the leader self-development activities.

Hypothesis 4b: Employee felt empowerment partially mediates the relationships between perceived empowering leadership behaviors and a) learner engagement, b) challenge, and c) structure.

A Comparison of Empowering and Consideration Styles of Leadership

The leadership literature is ripe with theorizing about how various styles of leadership impact employee behavior. Because of the relationships explicated above, this proposal has elected to focus on how the style of empowering leadership impacts employee leader self-development behaviors; however, for comparison purposes, this proposal will also examine another leadership style, specifically consideration style of leadership. Leader consideration behaviors foster a climate of psychological support (House, Filley, & Gujarati, 1971) by being friendly, treating group members as equals

and consulting the group on decisions and actions (Stogdill, 1963). These behaviors produce leader-follower relationships characterized by mutual trust and respect and have been found to be related to follower role satisfaction (House et al, 1971) as well as to follower task motivation (Tjosvold, 1984). Due to the ability of consideration leader behaviors to foster this climate where employees would feel psychological safe and respected, it is possible for these types of behaviors to impact the leader self-development activities of followers, given that engagement in leader self-development activities requires employees to feel that psychological able to engage in those behaviors. It is they hypothesis of this proposal, however, that leader empowering behaviors are a stronger predictor of leader self-development behaviors, and consideration behaviors is being used to illustrate this predictive ability of leader empowering behaviors. Therefore, I am making the following hypothesis regarding these differing styles of leadership:
Hypothesis 5: Empowering leader behaviors predict the quantity of leader self-development activities above and beyond consideration leader behaviors.

Leader Modeling Behaviors

Modeling is a component of Social Learning (or Social Cognitive) Theory (Bandura, 1977; 1986) and states that individuals can learn simply through observing behaviors and the consequences of those behaviors. By doing so, standards of behavior are learned, and it is natural that these standards are turned into the standards that individuals set for themselves. Given that Social Cognitive Theory has been termed one of the traditional theories of adult learning (Merriam & Caffarella, 1999), it is possible to make connections to leader self-development, one of the other adult learning theories.

In order for learning through observation to take place, the observers must pay attention to the model, retain information about the behavior that was modeled, produce similar behaviors to that of the modeled behavior, and also be motivated to engage in similar behaviors by understanding that there are positive consequences associated with that behavior (Bandura, 1977; 1986). By observing others, employees learn how to behave, and the example behaviors that leaders within an organization engage in often can serve as the behavioral standard for employees (Davis & Luthans, 1980). Along with serving as behavioral standards, managers and leaders can also be trained through modeling techniques. Latham and Saari (1979) empirically demonstrated that supervisors can effectively be trained through modeling techniques on such behaviors as motivating poor performers and overcoming resistance to change among employees. Those supervisors that were exposed to videos of supervisors effectively handling such situations were more likely to perform better on the job a year later compared to those supervisors who had not received the training. Burnaska (1976) conducted a similar experiment and also demonstrated the effectiveness of modeling in training appropriate leader behaviors.

These studies indicate that a powerful and viable option for developing leaders within organizations is through behavioral models. Aside from behavioral models, there are other avenues for employees to identify with and learn from leaders; particularly, employees may learn through the use of role models and mentors (Gibson, 2004).

However, in this specific case, the point of interest is in providing employees with a behavioral standard against which to gauge their leader development endeavors. This observation need not occur through a formal interaction such as mentorship, and it also may not include a psychological connection to an individual, as occurs with a role model (Gibson, 2004). As stated, where individuals learn appropriate behavioral guidelines is the focus here. The natural models that employees have to observe on a daily basis provide this standard. If leaders engage in positive, effective behaviors, employees can observe and choose them to model in their own behaviors. Specifically in the case of leader self-development, employees who are surrounded by leaders that engage in self-development activities themselves will be more likely to also partake in leader self-development activities as compared to those employees that have no external example of self-development to follow. By observing leaders who engage in leader self-development activities, employees should begin to view self-development as one of the main options for the development of their own leader selves, and if observed often enough, may even become the norm in the organization for how leader development should occur.

Hypothesis 6: The modeling of engaging in leader self-development activities by external leaders is positively related to the quantity of leader self-development activities.

Self-Identities

In any setting, performance is partially a function of motivation (Campbell, 1990). The role of motivation in the engagement of effective self-development is just as essential because of the emphasis put on the learner taking responsibility for his or her development. Understanding the motivation of self-developers will not only help to explain whether employees engage in leader self-development, but will also impact the quality of the self-development activities. Therefore, including a motivational component in a model of predictors of effective leader self-development is important. In this dissertation, motivation will be examined from a self-identity point of view.

Identity Theories

People's self-concepts are partially composed of identities (Lord & Brown, 2001). There are a variety of theories on self-identity; however, most agree that people possess multiple identities. For example, one of the most prevalent theories of identity is Social Identity Theory (Tajfel & Turner, 1979), which states that a person's social identity is a function of the social groups to which he or she belongs. This theory indicates that because people are naturally a part of different social collectives (e.g., a person has a gender, a race, and a religion), they have various social identities. According to Stryker's (1980, as cited in Shamir et al., 1993) identity theory, people have various identities within their self-concept that are arranged according to a hierarchy of salience, indicating that some identities are more accessible than others. For example, a person may be a parent, a world champion dancer and a professor. However, if being a parent is at the apex of the hierarchy, then that person will look for opportunities to perform his or her parenting role and will often times think in terms of that identity.

Identity salience can also be described in terms of self-schemas. Schemas are a long-standing cognitive construct that, in general, provide an organizing framework that leads people to interpret events and the world in a certain fashion. For example, people have social schemas about what will happen when they venture out to a restaurant: they will be greeted upon entering the establishment, led to their table, be given menus, etc. Social schemas also influence thoughts and behavior; people would not enter a restaurant and go directly to the kitchen to place their order. Similarly, everyone has self-schemas, which guide thoughts and behaviors about oneself (Markus, 1977).

Another way to examine self-identity is in terms of the Working Self Concept (WSC; Lord et al, 1999). The WSC is the idea that a person's self-concept contains many views of the self, only one of which (the WSC) can be salient at any given time. One of the essential components to the WSC is that its saliency is partially dependent on the surrounding context. The notion of the saliency of possible selves being influenced by the surrounding environment is congruent with Cropanzano et al's (1993) theory of leadership influencing their followers' goal hierarchies.

Identity and Goals

No matter the view adopted on self-identities, one of the most important aspects about self-identities is that they direct and guide behavior. Research has found that people with a strong self-focus were more likely to seek out activities where they could demonstrate proficiency in that particular domain (Markus, Cross, & Wurf, 1990) and also to seek out information that provided knowledge of their performance level (Carver & Scheier, 1982). These findings indicate a strong self-identity in one area is likely to push people to want to perform effectively in that area; they are also likely to increase the level of attention that they pay to themselves resulting in a behavioral change that meets the relevant performance standards. Therefore, those people with a strong sense of their identity should be more effective at setting and regulating goals. Although not explicitly stated in Stryker's (1980, as cited in Shamir et al., 1993) identity theory, the idea of self-identity as providing direction is implied. The identity that is at the apex of the hierarchy, and therefore, the most salient, will be the one that directs behaviors. This direction-setting aspect should have an influence on leader self-development activities.

Importance of Identity to Leader Self-Development

In order to engage in effective leader self-development, one of the things that the self-developer must possess is the motivation to take charge of his or her own development. If self-identity is to serve as a motivator to engage in leader self-development, individuals must possess a strong leader self-identity; in other words, they must see themselves as a leader to some extent in order to be motivated to develop themselves as a leader. Put simply, a strong leader self-identity is important because if a person does not envision him or herself as a leader, there is no need to engage in self-development activities to improve upon leadership skills. As stated above, people have multifarious self-identities which can be salient at one time or another. No matter what self is focused on, individuals are responsible for maintaining that self-identity. "Through

the selection and construction of possible selves individuals can be viewed as active *producers of their own development*" (Markus & Nurius, 1986, p. 955, emphasis added). Therefore, whatever self an individual chooses to focus on provides a developmental back-drop. If a person has a very salient self-identity in one domain, learning and development will be seen as highly relevant to actually maintaining that self. Since a self-identity is a very individualistic concept, it logically follows that the best way to develop this self-identity is through self-development where developers choose their own development materials.

An important part of the link between identity and self-development is the idea of self-verification. According to Farmer and Aguinis (2005), individuals engage in a process of self-verification where they hope to support and verify their identity. Therefore, if a person believes him or herself to be a leader, he or she will attempt to uphold this part of the identity; one way to do so is by engaging in leader self-development activities.

There is not much empirical evidence to-date that explicates the relationship between self-identity and self-development, but I will discuss two studies that provide support for this relationship. First, an empirical study by Maurer and Tarulli (1994) tested a conceptually similar relationship in which they found that individual values interacted with other variables to predict engagement in self-development. This relationship indicates that people will engage in self-development to develop skill-sets that they value. Therefore, if being a leader is part of one's identity, that aspect of the self will be valued, and participation in leader self-development activities is more likely to occur. Second, a recent dissertation (Hiller, 2005) empirically demonstrated the relationship between leader self-identity and leader development. Hiller found evidence that a strong leader self-identity is related to interest in participating in future leader development activities. Two points should be made about this finding however; first, the outcome of interest here was leader development in general and was not specific to self-development. Second, this finding is in relation to intentions to develop, similar to much of the other research in the self-development field. Therefore, this current study goes beyond Hiller's finding by not only examining actual engagement in leader self-development activities, but also how leader self-identity impacts the quality of these activities.

Therefore, I am proposing that a stronger leader self-identity leads to more effort by the individual into developing his or her leader self, thereby leading to an increase in the quality of leader self-development activities. In terms of specific dimensions of quality, a strong leader self-identity should have an influence on the content relevancy and challenge of the leader self-development activities, as well as have an impact on one's learner engagement. By definition, possession of a leader self-identity indicates a desire within a person to actually become a leader; because this desire impacts goal-setting, it is more likely that such an individual will have a more thorough understanding of where he or she stand as a leader (hence, impacting content relevancy). A stronger sense of identity as a leader is also an indicator that the activities picked to develop one's

leader self will be more challenging and that the self-developer will be more engaged in these activities since growing leadership skills is a very salient area of development. Based on this reasoning, I propose two different types of hypotheses regarding the influence of the leader self-identity on leader self-development activities, one direct effect and one multiplicative effect.

Hypothesis 7a: A strong leader self-identity is positively related to the quantity of leader self-development activities.

Hypothesis 7b: Leader self-identity and felt empowerment interact to predict the quantity of leader self-development activities such that the relationship is stronger for those employees who possess a stronger leader self-identity.

Hypothesis 8: A strong leader self-identity increases the a) content relevancy, b) learner engagement, and c) challenge of leader self-development activities.

Hypothesis 9: Leader self-identity and felt empowerment interact to predict a) learner engagement and b) challenge such that the relationships are stronger for those employees who possess a stronger leader self-identity.

Leader Self-Development Skill Training

Up until this point, I have discussed antecedents to engagement in effective leader self-development activities in terms of organizational factors that provide employees with the freedom to engage in leader self-development and individual motivational factors. However, another essential variable that will partially dictate participation in effective leader self-development activities is one's actual ability to do so. Employees may have the structural freedom and motivation to grow their leadership skills, but without the ability and knowledge of how to effectively do so, they will not be able to get very far; in other words, when it comes to effectively conducting leader self-development activities, self-developers need to "learn to learn." The importance of learning how to engage in effective leader self-development activities is highlighted in a recent meta-analysis; Ely and Sitzmann (2007) demonstrated that in a training situation, individuals cannot effectively assess what or how much they have learned. This finding has direct implications for self-development activities where the effectiveness of such activities is dependent on the ability of individuals to assess and evaluate their own development. Therefore, as part of my proposed model, I am including a training component which will provide participants with the necessary tools to aid in the development of skills, particularly focusing on the skills of self-appraisal and self-regulation, as well as the development of new perspectives within individuals.

The purpose of this training is to help individuals better engage in leader self-development activities by teaching them a process that will help them target specific leadership skills in need of development during leader self-development activities. This process-approach focuses on how to maintain and generalize learning (Gist, Bavetta, & Stevens, 1990), and not on the development of any one specific skill-set. Although much work has been conducted on the importance of self-regulation and the associated goal-setting components in terms of inducing behavioral change, goal-setting by itself is not

enough to facilitate behavioral change in terms of performance on complex tasks (Gist et al., 1990), such as leadership. Taken as one, the training of self-regulation and self-appraisal skills, with the addition of training on the development of new perspectives, fosters a different, more complex way of thinking within individuals that builds a more sophisticated model of the self. This complexity is necessary for individuals to fully grasp all of the pieces that are involved in engaging in effective leader self-development activities.

Although there are bound to be individual differences within these skill-sets, it is also thought that these skills are malleable and can be taught to some extent. The training of skills needed for self-development is important because, even though there has been an emphasis put on learning and development within organizations, it is still not clear how to actually put these principles into action (Antonacopoulou, 2000). Therefore, providing self-development tools to employees will help to further research on the skills needed for self-development and will also help to ensure the occurrence of higher quality self-development activities. I will now discuss the relationship between each of the skills involved in this process training and leader self-development activities in turn.

Self-Awareness and Self-Development

Conger (1992) identified four types of leadership development programs: 1) feedback-intensive programs, 2) conceptual programs, 3) skill-building programs, and 4) personal growth programs. The last type involves leaders acknowledging and examining their dreams and then making a commitment to reach those dreams (McCauley, 2001). One way to foster this type of a leader development program is to have leaders gain a deeper understanding of their personal values and drives, meaning that a greater self-understanding and self-awareness is developed. These types of programs are designed to “motivate and energize participants and increase their confidence in their ability to lead” (McCauley, 2001, p. 363). Because leader self-development is personalized development in that the self-developer can focus on any skills that he or she believes needs to be improved, a training program focusing on becoming more aware of one’s self is a key aspect of engaging in effective leader self-development (Hall, 2004). Therefore, the basis for any self-development program should be self-appraisal training that guides individuals in gaining self-awareness.

Self-awareness is “a measure of the person’s ability to be truly conscious of the components of the self and to observe it accurately and objectively” (Hall, 2004, p. 154). The development of self-awareness has been highlighted several times in the leader development arena as one of the main keys to engaging in effective development (London, 2002). Both career and self-insight have been shown to be important, interrelated variables. Career insight (London, 1993; Maurer & Tarulli, 1994) involves being aware of your own personal career situation and what your career opportunities are; it also involves understanding if you have the skills and abilities to reach such opportunities. Career insight has also been linked to one’s perceived need for skill development (Maurer & Tarulli, 1994). Therefore, self-insight into one’s strengths and

weaknesses is a critical aspect of having strong career insight. One of the keys to developing self-insight comes from reflection through self-appraisal activities.

Reflection is a process that is stressed within the adult learning literature. Even with different theories of adult learning, the common feature found among the theories is the importance placed on combining new and old experiences through reflection (Rigano & Edwards, 1998). Reflection is an important part of the learning process because it allows for those engaging in reflection to derive their own explanations as to why events or behaviors occurred; such self-explanations are more likely to cause a deeper understanding and comprehension compared to when the learner is simply informed of the explanation (Halpern, 2004). Butler (1994, as cited in Rigano & Edwards, 1998) delineated a model of human action and change in which professional growth occurs through cycles of action and reflection. Similarly, Antonacopoulou (2000) specified self-awareness, reflection and experimentation as key elements in the self-development process. These models indicate that before a person can take action to grow new skills (in this case, skills necessary to be a leader), a period of reflection must take place. After a person realizes the areas in which growth is needed, action needs to be taken to develop these skills. The cycle will then continue by reflecting on the tasks just completed and how they can be improved. By this cycle of action and reflection, self-developers can continually evolve and improve themselves while gaining insight into their strengths and weaknesses.

Therefore, teaching individuals to be self-aware of their current strengths and weaknesses is an important first step to engagement in effective leader self-development activities and has the potential to impact several of the quality attributes. First, by being more self-aware of themselves and the skills that are needed to be effective in the surrounding environment, individuals with strong self-appraisal skills should participate in leader self-development activities that are more content relevant compared to individuals with weaker self-appraisal skills. The more insight individuals have into themselves, the more likely it is that a need for development will be perceived (Maurer & Tarulli, 1994), and the more likely it is that individuals will be able to discern the content areas in need of development. Stronger self-appraisal skills are likely to facilitate understanding in terms of the skills necessary for success, leading to a selection of self-development activities that target various areas of leadership.

Strong self-appraisal skills can also impact the level of learner engagement that occurs during leader self-development activities. The more accurate individuals are in their self-appraisal, the more likely it is that they will note discrepancies between their current leader capacity and their desired leader capacity. This discrepancy may result in a sense of dissatisfaction with the self (Kanfer & Ackerman, 1989) which is likely to result in more effortful performance to reach the intended leader capacity (Bandura, 1977; Bandura & Locke, 2003). Therefore, individuals with strong self-appraisal skills will be more vigilant at noticing discrepancies between current and hoped for leadership

capabilities and will put more effort forth in their self-development activities to close this gap.

Finally, self-appraisal skills should impact the diversity of leader self-development in which an individual engages by simply getting individuals to reflect on their skills and the activities used to develop skills. As discussed above, part of gaining self-awareness is to cycle through a process of action and reflection. As individuals are reflecting on actions and behaviors in which they recently engaged, they should not only be examining their performance in those activities, but should also be more aware of the activity itself. The process of reflection should lead individuals to examine how improvements can be made to the self-development activities so as to more fully develop the necessary skills; these improvements may come in the form of trying many different activities upon realizing that one activity is not sufficient to completely develop the target skill. This process of reflection should cause those individuals to engage in a greater diversity of leader self-development activities compared to those who are not familiar with the process of reflection simply because those with greater self-appraisal skills will put more effort into evaluating the self-development activity at hand.

Self-Regulation and Self-Development

Self-regulation is the mechanism by which individuals direct their goals over time by modifying thoughts, affect and behavior in comparison with some set standard (Carver & Scheier, 1982; Porath & Bateman, 2006); self-regulatory behaviors allow people to align current and future behavior by providing an evaluative backdrop for a specific goal (Latham & Locke, 1991). Therefore, because self-regulation is conducted in regard to a specific goal or goals, goal choice and goal striving are the two main self-regulation processes (Chen, Thomas, & Wallace, 2005). Goal choice is important because it dictates the direction that effort will be spent, whereas goal striving sustains that effort through goal accomplishment. These aspects of goal setting and the self-regulation of these goals are extremely important to engaging in effective leader self-development activities.

As stated many times, the unique aspect of self-development is the focus that it places on the individual and the choices that individual makes. Through a strong sense of self-awareness, self-developers decide the relevant behaviors that they need to focus on to grow their leader self. After gaining this sense of self-awareness, the next component of self-regulation is making judgments regarding current capabilities; in other words, self-efficacy beliefs regarding one's capabilities are formed (Bandura, 1986). These beliefs then influence the chosen courses of action in terms of goal setting and goal striving. High self-regulation skills allow individuals to assess their progress towards their goals by providing the skills necessary to evaluate ones behavior and goal progress. An essential aspect of self-regulation is meta-cognition. Meta-cognition is "thinking about thinking;" an individual high on meta-cognitive skills understands the processes regarding how he or she thinks, allowing for that person to have cognitive control (Pintrich, Smith, Garcia, & McKeachie, 1993). For example, in order to better his or her organization skills, an individual decides to read a book on the most effective ways to

organize tasks; if this individual is high on meta-cognition, he or she will monitor reading comprehension and understand if his or her behavior needs to be changed to aid in further comprehension. In this example, the individual set a goal and then thought about the cognitive processes involved in actually reaching that goal; both of these are essential aspects of self-regulation. Meta-cognition, although relevant to general self-development, is essential when discussing leader self-development because of the emphasis within the leader development domain on expanding frame of references. In order for individuals to expand their frames of reference, they must first understand what content comprises their current frames of reference and how all of the components are interrelated; hence meaning that they must possess meta-cognitive skills in order to understand the inner workings of their cognitive frames.

Given that one cannot set meaningful goals without having an accurate understanding of one's strengths and weaknesses, the training of self-regulation skills is an essential follow-up to the training of self-appraisal skills. One useful tool in helping to teach self-regulation is to utilize learning contracts. Learning or behavioral contracts are agreements about the goals that individuals have and also state the detailed steps that the individual is going to take to reach that goal in a specified amount of time. Learning contracts are beneficial because they allow learners to have more control over their actual learning (Ellinger, 2004), an especially important aspect in self-development when individuals are responsible for their own progress and development.

Self-regulation skills should impact several of the quality dimensions associated with leader self-development. First, content relevancy should have a positive relationship with self-regulation skills. Given that the dimension of content relevancy involves developing skills that are actually in need of development, self-regulation has the power to impact this attribute through its two components: goal choice and goal striving. Self-regulation skills will help individuals set and strive towards content relevant goals by providing them with the cognitive components necessary to reach those goals effectively.

Self-regulation skills are also likely to influence the learner engagement component associated with leader self-development activities. Due to the components of goal-setting and goal-striving, high self-regulation skills move a person to action and also dictate the degree to which they demonstrate persistence and effort in those actions (Bandura, 1977; Schunk, 1981). Therefore, individuals high in self-regulation should make choices during self-development activities that positively impact the amount of practice and engagement that they put into that activity.

Finally, self-regulation skills are also likely to impact the degree of challenge that one chooses to include in leader self-development activities. To target to the goal setting components of self-regulation, the training of self-regulation skills should involve teaching individuals to make appropriate choices regarding goal behavior; in order for goals to be effective, they should be both specific and difficult (Latham & Locke, 1991). Following the goal setting process, individuals must make choices about their behaviors

in relation to progressing towards that goal (i.e., they must engage in self-regulation processes). If an individual has indeed chosen a difficult goal, the course of action to reach that goal must reflect its difficulty; people will adjust their level of effort to the difficulty of the goal and engage in more intense activities to accomplish difficult goals (Latham & Locke, 1991). In other words, difficult goals demand engagement in challenging activities to accomplish that goal. Therefore, self-regulation skills allow individuals to see that engagement in less challenging self-development activities does not promote progress towards their chosen difficult goal, leading to a subsequent behavioral adjustment necessary to close the gap between their behavior and their set goal standard.

Based on the above discussion of the training to be provided in terms of self-appraisal and self-regulation skills, several hypotheses are proposed. Because the participants in this study may naturally differ from one another on these skills, the hypotheses are set-up to illustrate how these skills will impact leader self-development activities. However, due to the longitudinal design of this study, it is also thought that these skill levels may change, specifically as a function of the training provided. Therefore, the hypotheses will be tested and compared for each training group across time.

Hypothesis 10: a) Self-appraisal skills and b) self-regulation skills positively impact the quantity of leader self-development activities.

Hypothesis 11: a) Self-appraisal skills and b) self-regulation skills both interact with felt empowerment to predict the quantity of leader self-development activities such that the relationships are stronger for those employees who possess stronger.

Hypothesis 12: Self-appraisal skills have a positive relationship with the quality dimensions of a) content relevancy, b) learner engagement, and c) diversity.

Hypothesis 13: Self-regulation skills have a positive relationship with the quality dimensions of a) content relevancy, b) learner engagement, and c) challenge.

Hypothesis 14: Self-appraisal skills and felt empowerment interact to predict learner engagement such that the relationship is stronger for employees who possess stronger self-appraisal skills.

Hypothesis 15: Self-regulation skills and felt empowerment interact to predict a) learner engagement and b) challenge such that the relationships are stronger for employees who possess stronger self-regulation skills.

Hypothesis 16: Self-appraisal skills and leader self-identity interact to predict a) content relevancy and b) learner engagement such that the relationships are stronger for employees who possess stronger self-appraisal skills.

Hypothesis 17: Self-regulation skills and leader self-identity interact to predict a) content relevancy, b) learner engagement, and c) challenge such that the relationships are stronger for employees who possess stronger self-regulation skills.

New Perspectives and Self-Development

One attribute of leader self-development activities that will be specifically targeted through training is diversity of self-development activities. Both self-appraisal and self-regulation skills may be important for anyone engaging in self-development activities, however by emphasizing the importance of gaining new perspectives through self-development activities, the training is especially relevant for individuals engaging in leader self-development activities. By encouraging individuals to engage in multiple methods to reach one leader self-development goal, the training is stressing the importance of developing new perspectives during self-development activities. This aspect of the training is essential in terms of helping individuals expand their frames of references and foster stronger adaptive thinking skills. This effort also provides a unique leader development training strategy, given that, to my knowledge, there is no empirical work demonstrating that an individual's conceptual capacity can be expanded, even though the rationale for such development is present (c.f., Zaccaro, 2001). By training individuals to adopt new perspectives during their leader self-development endeavors, those individuals are likely to gain a greater understanding of themselves and of the skill that is in need of development, hence increasing their conceptual capacity and helping to ensure higher quality development in terms of leadership.

The bases for including training focusing on developing new perspectives through a variety of experiences is found in the adult learning theory literature. First, from a general perspective, one idea that grounds most of adult learning theory is that experiences are fundamental to what is learned (Knowles, et al, 1998; Merriam & Caffarella, 1999). However, it is also necessary to explore the *characteristics* of experiences that induce the most development within individuals. As Day and O'Connor (2003) noted, "experience is an effective means for prompting development, provided that it causes an individual to think about something (self, other, leadership) in a different – and usually more complex – way" (p. 15). One such characteristic that should induce more complex thinking is the variety of developmental activities. Evidence for experiential variety being instrumental in the development of more complex ways of thinking can be found in Kolb's (1976; 1984) Experiential Learning Theory (ELT). One of the main tenets of this theory is that perceptual complexity is increased when exposed to differing points of view. Barnett and Kozlowski (2002) also arrived at a similar conclusion in their study, which demonstrated that general strategy consultants performed better than experienced managers or students on novel problems related to the restaurant industry. Barnett and Kozlowski explained this finding by saying that the consultants were better able to solve the problems by making use of their deeper, diversified knowledge structures that developed from having a variety of experiences. This finding highlights the importance of variety of experiences to the development of more complex knowledge structures, not just the experience alone.

Although there is theorizing about the importance of developing new perspectives during development, this relationship has not been empirically tested. It also has not been tested in the specific context of leader self-development; no study has demonstrated the importance of having individuals take on a variety of leader self-development activities to

facilitate perspective taking, and hence the development of adaptive thinking skills. It is proposed here that this training will increase the diversity of leader self-development activities, thereby increasing adaptive thinking skills. Support for such a relationship will demonstrate that self-development is a viable option in helping leaders to develop the cognitive skills necessary for effective leadership. The impact of this training will be tested over time and across conditions.

Taken together, the training of self-appraisal and self-regulation skills and training in the importance of developing new perspectives should direct a person in his or her leader self-development endeavors. Although leader self-development is a very individual process where people can learn in the ways that are most beneficial to them, the training of these skills should aid in the quality of the self-development that ensues.

The full model and all hypothesized relationships can be seen in Figure 1.

Method

Participants

Multi-level Marketing

The participants for this study will all be recruited from a multi-level marketing organization (MLM). Some prototypical examples of such organizations are Amway or Mary Kay. Within such organizations, all of the consultants are independent and considered self-employed. Within MLMs some good or service is sold that can only be bought from these independent consultants. Because such consultants are usually recruited into the organization by an individual that is already working for the organization (termed the “sponsor”) and the products are sold to individuals that the consultant knows or has a connection to, these organizations can also be termed network marketing organizations. However, the term multi-level marketing is more precise in that it describes the structure of the organization. Within MLMs there are many different levels of consultants, many of whom are tied to one another through their sponsors. For example, if person A is recruited in a MLM, she or he will now become part of a team that consists of his or her sponsor, all the other people that sponsor recruited, as well the network of people stemming from the sponsor’s sponsor. Once person A sponsors people, the network will expand some more. Promotion in this type of organization typically is given to people who have a high volume of sales and sponsor many people to also work for the organization, and, therefore, a hierarchy of rank and leadership is evident.

The Current Participants. The name of the organization from which participants will be recruited for this study will remain anonymous, and henceforth will simply be referred to as “the organization.” Within the organization, the hierarchical rank is such that one moves up by starting as an independent consultant, moving up to a District Manager (DM) position, and then to Area Manager (AM); finally there is a promotion to regional vice president (RVP) to be followed by a promotion to national vice president (NVP). As of September 2006, there were 59,703 registered consultants who had made it

at least to the DM level within the United States, including 1826 RVPs and 413 NVPs. On average it takes 24 months to get promoted to RVP and 44 months for the NVP promotion to occur. Therefore, it takes self-discipline and motivation to move up in the organization as it does not happen automatically.

For the current study, participants will be recruited through making initial contact with the organization NVPs. An email will be sent to each identified NVP, informing them of the basis of the study. The email will encourage them to inform their network about the study. Even though all of the consultants in the organization are considered to be self-employed and to be their own bosses, participation encouragement through the consultants' NVPs is thought to be the best way to solicit the most participation. A request will be sent to the NVPs that they forward the email onto the members of their network, who are then going to be asked to directly contact the researcher if they wish to participate.

The organization was chosen to be the target of study for a number of reasons. First, according to Day and Halpin (2004), organizations are transforming to deal with new environmental challenges; therefore, there is a need for leadership to be developed at every level of the organization. The organization of interest would benefit from this development at every level. Next, and perhaps more important, as stated, all of the participants coming from the organization will be self-employed, and hence, leader self-development is a very important process for the consultants to engage in. Because there is not a formal office where these consultants must go everyday and report to a supervisor, success only happens if they are motivated to do their work. Along with motivation, they must understand how to appropriately set and reach goals; therefore, the process of leader self-development is something that can help the consultants succeed in their leadership roles, roles for which they may not have had formal training. Also, this particular MLM was chosen because, within the organization, there is a message of self-growth that is communicated to the consultants. The consultants are encouraged to develop their skills and move up within the organization. Such encouragement, however, does not mean that every consultant who is involved in the organization will want to become an NVP. What it does mean, however, is that consultants of the organization should be willing to and want to participate in this study if they want the chance to improve their businesses through leader self-development.

Design

This study will be a longitudinal, between-subjects design, in which participants will be randomly assigned to either a control condition or one of two training conditions. Based on the discussion presented above, it can be seen that there are several individual difference skill variables (i.e. self-appraisal skills, self-regulation, and adaptive thinking skills) that should influence the leader self-development activities in which one engages; the training tools presented to the participants can potentially influence these variables to some degree. The participants in the first training condition will only receive training that introduces them to self-appraisal and self-regulation/goal-setting. The participants

assigned to the other training condition will receive adaptive skills training along with the training that pertains to those general self-development skills. Those participants who are part of the control condition will not receive any training tools. Measures of these skills will be administered to the participants before they are presented with the training tools and also several times after the presentation of the training tools through-out the duration of the study to determine if they training did have an impact on these skills. These measures and the training tools are described in more detail below.

Measures

All of the measures used in this study will be measures that have been validated in past research. However, because the focus organization is not a traditional, hierarchical organization, some of the items need to be adapted to fit with the organizational structure. All measures can be found in Appendix A.

Informed consent

Before completing any measures, all participants will be instructed to read an informed consent form. Because the proposed data collection method is through an online survey, it will not be possible to actually have the participants sign the informed consent. Instead, consent to participate will be given by advancing to the next set of questions in the online survey. This form will contain general information about the study and any potential risks involved and will also inform the participants that their participation in the study is completely confidential and that they can withdrawal from the study at any time. Participants will be instructed to enter their mother's maiden name as a way to link their survey responses overtime; this identifier will allow me to link one person's response over time but will make it difficult to actually determine the true identity of the participant. Although part of the study will require participants to email results, only the researcher will have access to those, and no identifying marks beyond the mother's maiden name will be entered into the database for the study.

Demographics

All participants will be asked to complete a demographics form requesting basic background information such as gender, amount of time with the organization, and position within the organization. Such information will only be used for control purposes.

Contextual Variables

Empowering leadership. Empowering leadership behaviors will be measured by a scale developed by Hui (1994) and used and adapted by both Ahearne (2000) and Ahearne, et al. (2005). This measure consists of a total of 10 items that assess four subscales of leader behavior. The subscales are Enhancing Meaningfulness of Work (three items; sample item: My leader helps me understand the importance of my work to the overall effectiveness of the organization); Fostering Opportunities for Participation in Decision Making (two items; sample item: My leader provides many opportunities for me to express my opinion); Expressing Confidence in High Performance (two items; sample

item: My leader believes that I can handle demanding tasks); Providing Autonomy from Bureaucratic Constraints (3 items; sample item: My leader makes it more efficient for me to do my job by keeping the rules and regulations simple). Each of the subscales has demonstrated high reliability in the past ($\alpha = .76 - .92$), and both convergent and discriminant validity have been established for this measure (Ahearne, 2000). This measure will be completed by the individual consultants and answered on a 7-point scale (1 = Strongly Disagree to 7 = Strongly Agree).

Because the participants in the current study are all self-employed and do not have a direct supervisor or leader that they report to, modified instructions need to be presented. For this measure (and in all cases where an external leader is the focus of attention) participants will be instructed to think of their team leader when responding to the questions. In most cases this team leader will be at the NVP level. Because consultants at all levels of the organization will be participating, it will be specified that if the person completing the measure is the team leader, he or she should think of a person in their upline (their sponsors' network) who was their team leader.

Empowered cognitions. Once employees are empowered, they should demonstrate certain cognitions; namely empowered employees should be self-determined and competent, believe that their work is meaningful, and that they have an impact with their work (Spreitzer, 1995). The measure to be used to assess these characteristics was developed by Spreitzer (1995) and has been used multiple times in past research. This measure consists of a total of 12 items, with multiple items used to assess each of the characteristics mentioned here. Sample items are "The work I do is very important to me" (Meaning subscale), "I have a significant influence over what happens in my organization" (Impact subscale), "I am confident about my ability to do my job" (Competence subscale), and "I can decide on my own how to go about doing my work" (Self-determination subscale). The four subscales have demonstrated sufficient reliability in the past ($\alpha = .79 - .85$), and have also been tested over a variety of samples. Spreitzer's (1995) original validation work on the scale also included sufficient estimates of test-retest reliabilities (ranging from .58-.74) and convergent validity. This measure will be completed by the individual consultants and answered on a 7-point scale (1 = Strongly Disagree to 7 = Strongly Agree).

Individual Difference Variables

Leader self-identity. In order to assess how strongly the leader sense of self is to the participants, a measure developed by Hiller (2005) will be used. Although there have been previous measures of leader self-identity in the literature (e.g., Engle & Lord, 1997), Hiller theorized that these measures were too indirect and tapped into individual perceptions of the traits that leaders should possess. Such indirect measures require participants to first rate traits in regard to how strongly they perceive these traits to represent leaders (e.g., knowledgeable, trustworthy); participants would then also rate these traits on how strongly they represent themselves. The measure to be used here (Hiller's measure) directly asks participants the extent to which they see themselves as a

leader. Based on the literature, there are three different aspects of a self-view or self-identity: descriptiveness (is the self-identity very descriptive of the self?), importance (is the self-identity very important to the self?), and certainty (is the person very certain about this aspect of his/her self-identity?). The measure for leader self-identity is composed of four different items that must each be answered in regard to the three different self-identity aspects. The four items are “I am a leader;” “I see myself as a leader;” “If I had to describe myself to others, I would include the word ‘leader;” and “I prefer being seen by others as a leader.” For the descriptiveness aspect, the stem asks the participants to rate the extent to which the items *describe* him/her ($I =$ not at all descriptive to $7 =$ extremely descriptive). For the importance aspect, the stem asks the participants to rate the extent to which the items are *important* to him or her ($I =$ not at all important to $7 =$ extremely important). Finally, the certainty aspect asks the participants to rate the extent to which he or she is *certain* about the statements ($I =$ not at all certain to $7 =$ extremely certain). Although Hiller found evidence of some inter-correlation between the different aspects, it seems best to test them separately and not just automatically aggregate all of the items. This measure has been demonstrated to have sufficient reliability ($\alpha = .87-.95$), and the measure has also displayed evidence of a well-fitting factor structure (Hiller, 2005).

Self-Development Skills. As stated, several different individual difference variables should impact the quality of the self-development activities in which employees in. Although these are individual differences, the focal variables here also appear to be malleable to some degree. Therefore, these variables will be targeted through the training tools. Specifically of interest are self-appraisal, self-regulation, and adaptive thinking skills. These skills will be measured both before and after the presentation of the training tools in order to determine the impact of the training. Self-appraisal skills will be assessed by a measure developed by Cortina (2005). This measure contains 15 items assessing how well and how often individuals analyze their needs. Ten of the items will be measured on a 7-point scale ($I =$ Strongly disagree to $7 =$ Strongly agree); an example of one of these items is “In the past month, before beginning a new task or job, I attempted to improve skills that I assumed would be needed.” There will also be five open-ended items (example: How often in the past month have you examined your performance on a particular task and tried to identify ways you could have done the task better?) where participants are required to fill-in a numerical response.

Meta-cognitive self-regulatory skills will be assessed through a subset of the Motivated Strategies for Learning Questionnaire (MSLQ) scale developed by Pintrich, et al (1993). This measure has 12 items that assess three dimensions: planning (“I try to think about a topic and decide what I am supposed to learn from it rather than just reading it”), monitoring (“When reading material I am not familiar with, I make up questions to help focus my reading”), and regulating (“If something I’m reading is difficult to understand, I change the way I read the material”). Sufficient reliability of this measure has been demonstrated in the past ($\alpha = .79$). This measure will be completed by

the individual participants and answered on a 7-point scale (1 = Strongly Disagree to 7 = Strongly Agree).

Training Manipulation

As stated, training tools will be given to participants as a way to manipulate the types of skills that will be useful in engaging in effective leader self-development activities. Self-awareness, self-regulation and adaptive thinking skills may be targeted dependent upon the experimental condition. These tools will stress the importance of such variables to engaging in effective leader self-development activities and will also provide participants with the opportunity to specify goals in terms of their leadership skills and then to create a learning contract based off of these goals. This learning contract will guide the participants in growing their leader selves by having them detail specific behaviors that they will engage in to reach certain learning objectives. Within the learning contract, the participants in the adaptive thinking skills condition will be instructed to think of at least three different ways that they can accomplish the same learning objective, whereas a specified number of activities will not be given to those participants in the other experimental condition; they will also be asked to reflect upon the unique skills and information that can be obtained from each activity. All participants will return the learning contract to me, and it will function as a manipulation check; due to the differing training conditions present in the study, the learning contract will be examined to determine if the participants understood and internalized the targeted skills presented in their particular training tools.

Through-out the course of the study, participants will also be emailed with training “boosters,” which provide additional information to the participants about the training materials. The purpose of these boosters is to remind participants of the training information so that they continually progress towards their leadership goals.

The entire set of tools can be found in the Appendix. Please note that for ease of presentation, in the Appendix, the tools are presented as a Word document. However, when presented to the participants, each screen will be a separate PowerPoint slide. Also referenced within the tools is an “excel workbook.” Blank excel sheets will also be emailed to the participants for them to complete various exercises at the times specified in the tools.

Outcome Variables

Effective leader self-development participation. In order to assess the quality of leader self-development activities, a definition of quality has to be obtained. Dimensions developed by Orvis (2007) will be used in this study. According to her work, quality self-development has five dimensions: content relevancy, practice, progress evaluation information, challenge, and structure. More detailed descriptions of each of these dimensions can be found in the Appendix. Each of these dimensions will be assessed in two ways. First, the participants will be instructed to complete self-report measures regarding a leader self-development activity that they engaged in that tap into these

dimensions. More importantly, however, coding will be conducted by researchers not affiliated with the study or the organization. Participants will be instructed to complete a detailed description regarding a leader self-development activity in which they engaged; coders will then examine these descriptions and rate them on the five dimensions listed above. This measure has been adapted from Orvis (2007) to include questions that will help facilitate understanding of how well the participants learned the skills targeted within the training tools given to them. For example, the adaptive thinking training teaches participants the importance of experiencing a variety of different perspectives and activities while embarking on self-development training. Therefore, within the measure of self-development quality, there are questions that ask them about other activities they have participated in to target one learning objective as well as questions that have them reflect on this activity. The participants that received the adaptive thinking training should be better equipped to answer these types of questions than the participants in the other two conditions. In addition, participants will be asked to report the amount of time that it took for them to participate in this activity as well as the extent to which the activity was chosen by them.

Adaptive thinking skills. Adaptive thinking skills will be measured with a scenario-based measure developed for this study. One scenario will be presented to each participant at each measurement time. This scenario will describe a situation and will ask participants to describe what they would do to deal with the presented situation. To assess whether the participants possess adaptive thinking skills, participants will then be told that the situation that they encountered has now changed, and the participant responses will be assessed on a 5-point scale to the degree that they 1) offer a functional strategic response to the first part of the scenario, 2) provide a novel strategy in response to the subsequent change, and 3) integrate information from both parts of the scenario in their response to the subsequent change.

Task performance. Performance will be measured based on personal volume of sales per month. Because it is not possible to obtain this number from company records, a biodata item must be relied on. Biodata items focus on past behavior and events and are typically objectively verifiable. Therefore, in this particular context, since the consultants' monthly personal volumes are verifiable through their NVP, it is thought that inflation is not a substantial concern (e.g., Mitchell, 1994).

Procedure

The design for this study is longitudinal, with measurement occurring over a three month period; an illustration of the timeline for the study can be seen in Figure 2. All measures will be collected through an online survey or over email. During the first measurement time all of the above instruments will be administered, albeit the ability manipulation involving the leader self-development tools. Prior to the first measurement period, participants identifying and contacting NVPs who will be asked to encourage their team members to participate in the study. The NVPs will pass the study information along to their team. Each person interested in participating will be asked to sign-up for

the study through a short online survey requesting their name and email address so that they can be contacted in the future. Upon replying to the researcher, each participant will be emailed with a link to an online survey containing the measures described above (Time 1 Measurement). Participants will be asked to complete these questionnaires within two weeks. A reminder email with the survey link will be sent to those who did not yet complete the forms after one week of the initial distribution and again at the two week point.

Following the collection of the initial measures, self-development guides will be emailed to two-thirds of the participants, although the content will be randomized. One-third of the participants will receive guidelines for how to engage in leader self-development, and another one-third will receive guidelines on how to gain self-development and adaptability skills. The final one-third of the participants will comprise the control condition, and therefore, will receive no guidelines and will only be told that they should engage in self-development activities to improve their leader effectiveness. The participants will be assigned to the different conditions based on the order that they submitted their responses to the initial questionnaires (i.e., the first person to respond will be in the first condition, second person in the second condition, etc). The participants will be given approximately two weeks to study and look through the guidelines, with a reminder email sent from the researcher at the half-way point.

Two weeks after the training tools are presented, the participants will be instructed to return their learning contract to me. Approximately two weeks after that, I will email all of the participants (including those in the control condition) with a link to the same Self-Development Participation Measure that they all completed during the initial data collection and with the measures assessing the skills relevant to leader self-development and performance (Time 2 Measurement). The participants will have two weeks to complete these measures. At this time, the first training booster will also be administered to the participants, followed by the second training booster two weeks later.

Finally, over approximately one and a half months after the Self-Development Participation Measure was sent to the participants for the second time (approximately three months after the initial data collection began), participants will again be emailed with a link to complete the Self-Development Participation Measure for the third, and final, time; they will also be asked to complete the skill and performance measure again (Time 3 Measurement). Once again, they will be given two weeks to complete the questionnaire, with reminder emails being sent at one week, and again at the two-week deadline if necessary.

Following the collection of all data, the researcher will email the full leader self-development guide to all participants who did not receive it during the course of the study.

Analysis Plan

The model will be tested through Structural Equation Modeling (SEM) using LISREL 8.0 (Joreskog & Sorbom, 1993). First, the fit indices for the overall model will be examined to assess how well the variables come together to predict effective leader self-development. Also, each individual path coefficient will be examined to see if support was demonstrated for the individual hypotheses. A time variable will be incorporated to understand how the relationships between the variables changed over the course of the study.

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