To the Graduate Council:

I am submitting herewith a dissertation written by Carrie A. Blair entitled "A Dispositional Model of Leader Development: The Role of Core Self-Evaluation, Narcissism and Goal Orientation." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Industrial and Organizational Psychology.

Michael C. Rush
Major Professor

We have read this dissertation
and recommend its acceptance:

Dave Woehr

Michael Lane Morris

Eric Sundstrom

Accepted for the Council:

Carolyn R. Hodges
Vice Provost and Dean of the
Graduate School

(Original signatures are on file with official student records.)

A DISPOSITIONAL MODEL OF LEADER DEVELOPMENT: THE ROLE OF CORE SELF-EVALUATION, NARCISSISM, AND GOAL-ORIENTATION

A Dissertation
Presented for the
Doctor of Philosophy
Degree
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Carrie A. Blair
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Dedication

I dedicate this dissertation to my parents, Jim and Mary Jane Blair, and their parents, Fred and Edra Hill, and Dennis and Iris Blair. Of all of the lessons that I have been taught, you taught me the ones that are the most important.

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Before starting the doctoral program, someone told me that I was about to form relationships that would follow me for the rest of my life. I cannot say if that prophecy was correct… but I sure do hope that it was.

Abstract

Organizations are frequently investing time and money in preparing to develop the leaders within their organizations. Past research has shown that individual differences are generally related to participation in leader development activities, and past research has confirmed that individual difference factors are related to individual propensity to accept feedback. Furthermore, it has been demonstrated that participation and attention to feedback are important. The purpose of this dissertation was to explore two alternative measures of leader development effectiveness (e.g., the quality of leader development goals; correspondence between leader development feedback and leader development goals), and to examine potential dispositional antecedents of these criteria (e.g., core self-evaluation; goal orientation; narcissism). Several control variables were also included in the study (e.g., critical thinking ability; responsibility; and past feedback and development experience).

The data used in this study was archival in nature, and came from 119 individuals enrolled in a leader development program associated with an Executive MBA degree at a Southeastern university. Multiple conclusions were drawn based on the results. First, goal quality and feedback-goal correspondence are not redundant variables; individuals who submit goals that appear difficult and specific are not necessarily incorporating the feedback they received into the goals. Second, performance-prove goal orientation, performance-avoid goal orientation, and narcissism are each negatively related to feedback-goal correspondence. Third, variables that tend to predict the choice to participate in leader development (e.g., core self-evaluation; goal orientation) do not necessarily predict quality of developmental goals once enrolled in leader development.

Fourth, critical thinking ability was positively related to both goal quality and feedback-goal correspondence, and past participation in developmental activities was positively related to goal quality, lending validity to the goal quality and feedback-goal correspondence measures.

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CHAPTER I

Introduction and Literature Review

Leader development programs have emerged as popular tools in organizations and educational institutions (Day, 2000; Squires & Adler, 1998). These programs sometimes occur within the organization, by an external assessment company, or through contact with an executive coach (Day, 2000). Furthermore, they may be introduced for a variety of different reasons, such as to groom individuals for leader positions or to intervene for a manager on the verge of derailing (Day, 2000; Hogan, 1994). The hallmark of leader development is feedback. Individuals enrolled in leader development are frequently given various pieces of feedback, which they are expected to use to minimize their weaknesses and capitalize on their strengths. Despite the popularity of these programs, there has been very little research on the effectiveness of the implementation of these programs. Indeed, Squires and Adler (1998) note that much research has examined assessment accuracy (e.g., Bennett, Lance, & Woehr, 2006), but less research has examined whether the feedback provided during assessment is actually used by the targets of the assessment. Squires and Adler (1998) also highlight that many performance appraisals include sections for the individuals to outline their plans for professional and personal development, yet "…experience indicates that these items are rarely carefully tracked and followed to ensure implementation" (p. 447).

Understanding the relationship between feedback and leader development is important, as past feedback research indicates that providing people with feedback does not always result in performance improvement (Ilgen, Fisher, & Taylor, 1979; Kluger & DeNisi, 1996; Squires & Adler, 1998; Taylor, Fisher, & Ilgen, 1984). For instance, a

meta-analysis by Kluger and DeNisi (1996) suggests that feedback only results in improved performance one-half of the time (See also Atwater, Waldman, Atwater, & Cartier, 2000). Multiple factors might have an effect on how feedback influences subsequent performance, including characteristics of the feedback source (Ilgen, Fisher, & Taylor, 1979), characteristics of the feedback message (Ilgen, Fisher, & Taylor, 1979; Kluger & DeNisi, 1996), and characteristics of the feedback recipient (Ilgen, Fisher, & Taylor, 1979; Taylor, Fisher, & Ilgen, 1984). Several theories have been utilized to explain why people do not always respond to feedback by improving their performance. These theories include goal theory (Locke & Latham, 1990), control theory (Carver & Scheier, 1981; Taylor, Fisher, & Ilgen, 1984), and feedback intervention theory (Kluger & DeNisi, 1996; for a complete discussion of how these theories are used to explain reactions to feedback, see Kluger & DeNisi, 1996). While many studies have examined individual reactions to job performance feedback, only a few studies have examined how people react to feedback given during the context of leader development. Importantly, as leader development feedback is different than job performance feedback, it is essential to examine how people react to leader development feedback (Ryan, Brutus, Greguras, & Hakel, 2000).

For instance, job performance feedback is typically task-focused, and the goal of the feedback is to improve performance on a particular set of job duties or in a specific job context. In contrast, leader development program feedback is person-focused, and the goal of the feedback is to change the individual's general behavior (Ryan, Brutus, Greguras, & Hakel, 2000). Likewise, with job performance feedback, there is a set of performance standards that a person must maintain; however, there is not a set of

performance standards in leader development feedback. Whereas the theories used to explain traditional job performance feedback are most often based on the person trying to reduce the discrepancy between their actual performance and their performance goals (e.g., goal theory, control theory, and feedback intervention theory), there is not a set goal in leader development feedback, thus theory regarding performance-goal discrepancy cannot be relied on to explain individual reactions to leader development feedback. Moreover, a supervisor most frequently provides job performance feedback, whereas leader development feedback is usually accumulated from a number of appraisers, some of them from outside the person's work environment (e.g., assessment center staff). Finally, job performance feedback is often limited to extrinsic reward, whereas leader development feedback is seldom linked to extrinsic reward (Ryan, Brutus, Greguras, & Hakel, 2000). Indeed, participants in leader development programs generally feel that the benefits of participating in the programs are more likely personal than career-oriented or job-oriented (Noe & Wilk, 1993).

Furthermore, at least one study indicates that individuals' reactions to leader development program feedback are different than reactions to traditional job performance feedback. Specifically, traditional feedback research suggests that people most value feedback from a superior source (e.g., an expert or a supervisor; Snyder & Newburg, 1981); however, leader development research suggests that subordinate feedback is more likely to be incorporated into self-development plans than is supervisor or peer feedback (Brutus, London, & Martineau, 1999; Smither, London, Reilly, Flautt, Vargas, & Kucine, 2003). To summarize, although many studies have examined reactions to traditional feedback (Ilgen, Fisher, & Taylor, 1979; Kluger & DeNisi, 1996; Taylor, Fisher, & Ilgen,

1984), these findings do not necessarily generalize to leader development research. As leader development programs are gaining in popularity, and as companies invest large sums of money in leader development, several authors have noted the importance of understanding the factors that influence participation in the programs (Albright & Levy, 1995; Atwater, Waldman, Atwater, & Cartier, 2000; Jones & Whitmore, 1995; Maurer, Mitchell, & Barbeite, 2002; Maurer & Palmer, 1999; Maurer & Tarulli, 1994), as well as understanding how specific feedback provided during the programs is addressed and incorporated into future plans for development (Brutus, London, & Martineau, 1999; Ryan, Brutus, Greguras, & Hakel, 2000). An overview of leader development research is provided in the next section.

Leader development program research

Because of the differences between the characteristics of leader development feedback and job performance feedback, it is important to understand the different factors that might influence the development of those enrolled in a leader development program. A few studies have specifically examined participants' behavior in leader development programs, and how behaviors during leader development programs influence subsequent performance.

Participation in leader development opportunities is important, as development participation is related to subsequent performance and career advancement (Englebrecht & Fisher, 1995; Jones & Whitmore, 1995). In studies that have examined the effect of multiple factors on the behavior of individuals participating in leader development, personality consistently emerges as an important predictor of leader development participation (Funderburg & Levy, 1997; Maurer, Mitchell, & Barbeite, 2002; Maurer &

Tarulli, 1994; Noe & Wilk, 1993). Specifically, self-efficacy (Maurer, Mitchell, & Barbeite, 2002; Maurer & Tarulli, 1994; Noe & Wilk, 1993), job involvement (Maurer & Tarulli, 1994), and implicit theory of skill malleability (Maurer, Mitchell, & Barbeite, 2002) are related to participation in leader development. In fact, Maurer and Tarulli (1994) state that it is important to "…carefully consider the individual differences in this context when targeting many different types of employees for participation" (p. 3).

The relationship between personality and behavioral changes based on leader development feedback has not been examined. Theoretically, individuals are more likely to be receptive to feedback if they desire self-awareness, self-enhancement, and are open to new experiences (London & Smither, 2002), and they are less likely to be receptive to this feedback if they are highly narcissistic (Helland & Blair, 2005; Hogan, 1994; Kernis & Sun, 1994; Kets de Vries & Miller, 1985; Smalley & Stake, 1996). Furthermore, people who have a learning goal emphasis should be more receptive to feedback than people who have a performance goal emphasis (London & Smither, 2002; Squires & Adler, 1998). Additionally, Squires and Adler (1998) theorize that individuals with high self-esteem and high self-efficacy will, "…invest more effort in development, given their stronger expectation for the development to result in enhanced proficiency" (p. 484).

In summary, several studies have examined the relationship between individual difference factors and participation in leader development. However, these studies have either examined several personality characteristics in isolation, or they have forwarded theoretical ideas without specifically examining the ideas in the context of leader development. To date, there is not a clear model of the role of personality in leader development participation. In this study, a model of the relationship between personality

characteristics and leader development outcomes is proposed, and the validity of this model in the context of executives enrolled in a leader development program is examined. The personality variables included in this study are core self-evaluation (e.g., a latent construct based on four manifest indicators: self-esteem, self-efficacy, locus of control, and neuroticism), goal orientation, and narcissism. Three variables are included as control variables in the study: responsibility, critical thinking ability, and previous development experience. The leader development criteria used in this study are discussed in the next section.

Measurement of Outcomes

In leader development research, investigators commonly use participation in leader development opportunities as a research criterion (Maurer, Mitchell, & Barbeite, 2002; Maurer & Tarulli, 1994; Noe & Wilk, 1993). For example, several studies have examined how different types of feedback, contextual factors, and some personality predictors are related to participation in developmental opportunities. In these studies, participation in leader development opportunities has been measured in a variety of ways, including asking participants to indicate which specific developmental recommendations they had completed since the receipt of developmental feedback (Jones & Whitmore, 1995), asking participants to rate their participation in on-the-job and off-the-job developmental opportunities (Maurer, Mitchell, & Barbeite, 2002; Maurer & Tarulli, 1994; Noe & Wilk, 1993), and collecting objective records maintained by organizations (Noe & Wilk, 1993). However, most of this research has used a generic measure of participation, such as self-report interest or number of hours spent involved in workshops or activities, without examining the benefits of the time spent in development, or whether

the time spent in development corresponds with the development needs of the participants. Furthermore, these studies have not taken into account unforeseen factors that might make it difficult to participate in the activities, such as personal events or work challenges. In addition, the majority of these measures are self-report measures, which may be influenced by the personality of the participants completing the measures.

At least one study has attempted to understand individual participation in leader development by examining the goals formed by individuals based on the feedback that they received during a leader development program (Brutus, London, & Martineau, 1999). The study specifically examined which source of 360-degree feedback was most likely to impact the goals formed for development. However, this study did not examine the relationship between dispositions and goal formation, but rather focused on how different feedback sources influence goal formation. The purpose of this dissertation is to examine how dispositional factors are related to the formation of developmental goals following receipt of leader development feedback.

More specifically, the individuals in this study received developmental feedback. They were then given a workbook to help them understand their feedback, and they were instructed to draft four goals that they would like to address during their 9-month enrollment in a leader development program. The workbook included a basic template to help them construct their goals. The participants were aware that they would be paired with a leader development facilitator to guide them in accomplishing their leader development goals. Although the methods used in this study are specific to one leader development program, similar methods are used at other leader development programs

(e.g., Brutus, London, & Martineau, 1999; Day, 2000; Ryan, Brutus, Greguras, & Hakel 2000). The goals will be used as indicators for two different criteria.

Goal Quality

The first criterion is goal quality, and is used as an initial measure of the participant's intention to participate and engage in the leader development opportunity in order to change their own behavior. Based on goal setting theory, behavior change is most likely to occur when goals are set that are 1) difficult to achieve and 2) accompanied with specific steps. Thus, goal quality has consistently been associated with goal difficulty and goal specificity (Locke & Latham, 1990).

Anecdotal evidence from the author's experience with the leader development goals suggests that some of the participants submit complete, challenging, and specific leader development plans (e.g., improve my coaching skills by becoming more aware of my company's employee development program and taking a seminar on mentoring others). However, other people submit superficial leader development goals that appear to only fulfill the class assignment to submit goals (e.g., attend all required leader development meetings), and do not reflect a plan to change behavior or engage in the leader development opportunity. Furthermore, based on conversations with leader development facilitators, the effort put into the formation of the initial goals generally corresponds with the amount of effort expended throughout the course of the leader development program. For the purpose of this study, the goals that individuals submit will be evaluated based on several factors, including whether the goals are specific and difficult enough to result in a substantial change in behavior. Thus, goal quality serves as an initial measure of participation in leader development.

The leader development goals are also used as a measure of whether the participants incorporate developmental feedback into their goals. The second criterion, feedback-goal correspondence, is discussed in the next section.

Feedback-Goal Correspondence

It is important to understand what factors may influence whether individuals enrolled in leader development programs use and internalize the developmental feedback that they receive during the programs. First, feedback acceptance is one behavior that distinguishes ethical and unethical leaders (Howell & Avolio, 1992), and leader development has been suggested as one means to reduce managerial incompetence (Day, 2000). Second, some characteristics associated with unethical leadership are also associated with a strong resistance to negative feedback (Hogan, 1994; Hogan & Kaiser, 2005). Third, one hallmark of leader development is that participants are given feedback of their strengths and their developmental weaknesses (Day, 2000). Thus, it is important to understand whether dispositional factors affect whether or not individuals enrolled in leader development programs use the feedback that they are given during the course of the program. Feedback-goal correspondence is operationalized as the percentage of each individual's leader development goals that correspond with the developmental feedback that they received during the leader development program.

To summarize, the purpose of this study is to examine how dispositional factors influence the behavior of individuals enrolled in a leader development program. Two criteria will be measured in this study: goal quality and feedback-goal correspondence. Three dispositional factors are included in this study: core self-evaluation, goal

orientation, and narcissism. In the following sections, the dispositional factors are discussed and hypotheses are offered.

Core Self-Evaluation

The core self-evaluation (CSE) personality concept was originally proposed by Judge, Locke, and Durham (1997). CSEs are the basic conclusions that individuals have about their own worth. According to Judge and colleagues (1997), personality traits are indicative of CSE if they meet three criteria: 1) the traits must be evaluation-focused, 2) they must be fundamental rather than surface level traits, and 3) they must be broad in scope. Judge and colleagues concluded that four personality traits should be included in the CSE framework: self-esteem, self-efficacy, locus of control, and neuroticism (Judge, Locke, Durham, & Kluger, 1998). Specifically, self-esteem is the value that one places on the self (Baumeister, 1997; Rosenberg, 1965, 1989). Self-efficacy describes one's belief about his or her ability to handle life's challenges (Bandura, 1997). Locus of control can be defined as an individual's feelings of control over his or her own life; locus is internal if the individual feels that he or she can generally control his or her outcomes in life (Rotter, 1966). Finally, neuroticism is one's general sense of well-being, often described as the tendency to have a negative outlook or to focus on the negative events and aspects of one's circumstances (Eysenck & Eysenck, 1968b). People with strong CSE are low on neuroticism.

Even though self-esteem, locus of control, and neuroticism are among the most frequently studied personality factors in industrial/organizational psychology, and even though these variables, along with self-efficacy, are conceptually related and tend to be highly correlated, they have traditionally been examined separately (Erez & Judge, 2001).

Judge and colleagues (Judge, Erez, Bono, & Thoresen, 2002) argue that these personality characteristics are conceptually related and are similar constructs in that all four are self-evaluations of worthiness and describe the individuals' general outlook on life. Based on their findings, self-esteem, self-efficacy, locus of control, and neuroticism are highly correlated, demonstrate similar correlation patterns with other variables, and do not add incremental validity to outcomes beyond the CSE variable. Erez and Judge (2001) showed that all four of these traits loaded on one higher-order factor, and this factor explains more variance in job behavior criteria than does each of the manifest indicators considered in isolation. Thus, self-esteem, self-efficacy, locus of control, and neuroticism are appropriately considered as manifest indicators of a latent construct, CSE.

As a latent construct, CSE has demonstrated significant correlations with several outcomes. CSE is positively related to life satisfaction (Judge, Locke, Durham, & Kluger, 1998; Judge, Bono, Erez, & Locke, 2005), job satisfaction (Judge, Bono, Erez, & Locke, 2005; Judge, Locke, & Durham, 1997; Judge, Locke, Durham, & Kluger, 1998), and job performance (Erez & Judge, 2001; Judge and Bono, 2001). Moreover, individuals with high core self-evaluation report lower levels of stress, strain, and depression (Blair, Meriac, & Morris, 2007; Judge, Erez, Bono, & Thoreson, 2002). In general, CSE is one of the strongest personality predictors of the two most commonly studied outcomes in the industrial/organizational psychology literature: job performance and job satisfaction. Furthermore, CSE as a latent construct is more highly related to these outcomes than is any one of the manifest indicators considered separately.

CSE is an important personality characteristic in a model of participation in leader development and reactions to leader development feedback for several reasons. First,

self-efficacy, one of the manifest indicators of CSE, has already been theoretically and empirically associated with leader development outcomes (Maurer, Mitchell, & Barbeite, 2002; Maurer & Tarulli, 1994; Noe & Wilk, 1993). In other contexts, CSE explains the variance in outcomes better than its manifest indicators, thus it is expected that CSE will be related to leader development participation and reactions to leader development feedback. Second, CSE has demonstrated a relationship with similar outcomes in other contexts. Specifically, CSE is related to job satisfaction and job performance, and mediating factors in these relationships include task motivation, task persistence, intrinsic job characteristics, job complexity, and goal self-concordance. Goal self-concordance is the degree to which one's goals correspond with their ideals, values, and interests (Elliot, Sheldon, & Church, 1997; Sheldon & Elliot, 1998). An overview of CSE's relationship with these outcomes is provided in the next section. Subsequently, the role of CSE in the dispositional model of leader development is discussed further.

CSE's Relationships with Outcomes

The impetus for the formation of the CSE construct was to better understand the dispositional causes of job satisfaction (Judge, Locke, & Durham, 1997). In conjunction with research examining the relationship between CSE and job satisfaction, CSE has also been examined as a predictor of job performance (Judge & Bono, 2001; Erez & Judge, 2001). That is, CSE has been examined as one of the most valid predictors of job satisfaction and job performance, arguably the two most frequently examined criteria in the field of Industrial/Organizational psychology (Judge & Bono, 2001). Subsequently, multiple studies have examined the etiology of CSE's relationship with job satisfaction and job performance. These studies suggest that these relationships are mediated by

perceptions of intrinsic job characteristics (Judge, Locke, Durham, & Kluger, 1998; Judge, Bono, & Locke, 2000), objective job complexity (Judge, Bono, & Locke, 2000), goal self-concordance (Judge, Bono, Erez, & Locke, 2005), task motivation (Erez & Judge, 2001), and task persistence (Erez & Judge, 2001; Judge, Bono, Erez, & Locke, 2005). Understanding these mediating factors is also important to the understanding of the role of CSE in the dispositional model of leader development. More specifically, Judge and colleagues (Judge, Locke, Durham, & Kluger, 1998) found that perceptions of intrinsic job characteristics partially explain the relationship between CSE and job satisfaction. That is, CSE is positively associated with autonomy, meaningfulness, and job interest. Individuals with high CSE tend to focus on the positive aspects of their selves and surroundings (Judge, Erez, & Bono, 1998), thus they may be more likely to associate their jobs with intrinsic job characteristics (Judge, Locke, Durham, & Kluger, 1998).

There is also a positive relationship between CSE and objective job complexity (Judge, Bono, & Locke, 2000). Thus, although the relationship between CSE and intrinsic job characteristics may be partially due to a general positive outlook on the part of those with high CSE, it appears to also be related to the actual job complexity of individuals with high CSE. Hence, the relationship between CSE and job satisfaction is partially mediated by perceptions of intrinsic job characteristics (Judge, Locke, Durham, & Kluger, 1998), and the relationship between CSE and intrinsic job characteristics is partially mediated by job complexity (Judge, Bono, & Locke, 2000).

Furthermore, individuals with high CSE are more likely than individuals with low CSE to report that their goals are concordant with their ideals, interests, and values

(Judge, Bono, Erez, & Locke, 2005). In describing goal self-concordance, Elliot, Sheldon, and colleagues (Elliot, Sheldon, & Church, 1997; Elliot & Sheldon, 1997; Sheldon & Elliot, 1998) argue that people may pursue goals for one or more of four reasons: intrinsic, identified, interjected, and external. Individuals who report that their goals are aligned with their ideals, interests, and values pursue goals for intrinsic or identified reasons. Pursuit of a goal is intrinsic if it is pursued because it provides fun and enjoyment; pursuit of a goal is identified if it is pursued because it is believed to be an important goal to have. In contrast, individuals who report that their goals are not aligned with their ideals, interests, or values pursue goals for external or interjected reasons. Pursuit of a goal is external if it is pursued because it fulfills others' wishes or is connected to the attainment of some extrinsic reward; pursuit of a goal is interjected if it is pursued in order to avoid feelings of shame, guilt, or anxiety. Thus, one of the reasons that CSE is positively related to job and life satisfaction is that those with high CSE see their tasks, goals, and work as contributing to the pursuit of their own ideals, interests, and values (Judge, Bono, Erez, & Locke, 2005). In turn, goal self-concordance is positively related to job and general life satisfaction. Similarly, Judge and colleagues' study (Judge, Bono, Erez, & Locke, 2005) also found that goal self-concordance mediates the relationship between CSE and goal obtainment. That is, not only are those with high CSE likely to identify with and internalize their goals, making them experience more job and general life satisfaction, but those that identify with and internalize their goals are also more likely to obtain their goals.

These findings correspond with previous research regarding the relationship between CSE and job performance. That is, based on meta-analytic results, CSE is related

to job performance (Judge & Bono, 2001), and motivation mediates the relationship between CSE and job performance (Erez & Judge, 2001). Specifically, in a lab study, CSE was related to task persistence and task motivation, and these factors partially mediated the relationship between CSE and task performance. Similarly, in a sales organization, CSE was related to objective and subjective sales performance, and this relationship was partially mediated by self-reported goal commitment and self-reported goal persistence (Erez & Judge, 2001).

In early work, Judge and colleagues (Judge, Erez, & Bono, 1998; Judge, Locke, Durham, & Kluger, 1998) discussed the possibility that a general positive outlook partially explains the relationship between CSE and positive perceptions of intrinsic job characteristics. Similarly, this same positive outlook could explain the relationship between CSE and goal self-concordance (Judge, Bono, Erez, & Locke, 2005), and CSE, task persistence, and task motivation (Erez & Judge, 2001). More specifically, individuals with high and low CSE could be pursuing similar goals; the difference may be that individuals with high CSE see these goals as intrinsically rewarding and self-concordant, whereas individuals with low CSE state that they are pursuing goals based on extrinsic motivation or because the goals were assigned. Because individuals with high CSE identify with and internalize their goals, they are also more likely to be motivated and persistent in pursuing their goals.

Essentially, this difference in outlook may have very little to do with objective characteristics of the goal, but rather may have everything to do with whether or not the individual thinks that he or she is able to obtain the goal. An extrinsic or interjected reason for the goal may serve as a defense mechanism to protect those with low CSE

from the negative feelings associated with failure. To illustrate, when given a task, individuals with high CSE are more likely to believe that they will be successful with the task, thus they internalize the task, consequently experiencing greater intrinsic rewards associated with successfully completing the task. However, individuals with low CSE believe that they may fail at the task, thus they protect themselves from failure by attributing externalized or interjected reasons for pursuing the task. That is, they convince themselves that the task is not important to them, so that they will not experience disappointment if they are not successful on the task. This same reasoning helps explain the relationship between CSE and intrinsic job characteristics and the relationship between CSE and task motivation and persistence. Individuals with high CSE are able to assign more meaningfulness to their jobs than are individuals with low CSE, as high CSE individuals expect positive outcomes associated with their jobs. Because individuals with high CSE internalize their goals, they may also perform better when pursuing these goals.

To summarize the CSE construct, CSE is positively related to job satisfaction (Judge, Bono, Erez, & Locke, 2005; Judge, Bono, & Locke, 2000; Judge, Locke, & Durham, 1997; Judge, Locke, Durham, & Kluger, 1998). The relationship between CSE and job satisfaction is mediated by perceptions of intrinsic job characteristics (Judge, Locke, Durham, & Kluger, 1998; Judge, Bono, & Locke, 2000), objective job complexity (Judge, Bono, & Locke, 2000), and cognitive explanations of goal self-concordance (Judge, Bono, Erez, & Locke, 2005). CSE is also positively related to job performance (Erez & Judge, 2001; Judge & Bono, 2001). The relationship between CSE and job performance is partially mediated by task motivation and task persistence (Erez & Judge, 2001). Individuals with high CSE may experience more task motivation because they

perceive their tasks, goals, and work as self-concordant. While CSE's strong relationship with job satisfaction and job performance are certainly interesting, the key to understanding CSE's role in the dispositional model of leader development is in an examination of the factors that mediate CSE's relationships with job satisfaction and job performance. CSE's relationships with goal quality and feedback-goal correspondence are discussed in the two subsequent sections.

CSE and Goal Quality

In the dispositional model of leader development behavior, it is hypothesized that CSE is directly and positively related to goal quality. This hypothesis is forwarded for several reasons. First, individuals with a positive CSE are more likely to expect to perform well on the tasks in which they engage, thus are also more likely to identify with their tasks and perceive their tasks as intrinsically rewarding. As high CSE individuals internalize their tasks, they should generally be more engaged in their tasks than are other individuals. Second, CSE is positively related to goal commitment, goal persistence, and general task motivation in other settings (Erez & Judge, 2001), and so it is expected that these characteristics of high CSE individuals will also result in the formation of quality leader development goals. Third, individuals with a low self concept are more likely to partake in escapist behaviors and generally avoid self-reflection (Baumeister, 1997; Judge, Erez, & Bono, 1998). As a result, it is expected that those with a high CSE will be more likely to reflect on their own strengths and weaknesses, and thus submit quality leader development goals than will those with a low CSE. Finally, manifest indicators of CSE have previously been related to participation in leader development. Specifically, other studies have shown a relationship between self-efficacy and participation in leader

development opportunities (e.g., Maurer, Mitchell, & Barbeite, 2002; Noe & Wilk, 1993), and authors have theorized that self-esteem should be related to participation in development (Squires & Adler, 1998). For these reasons, CSE is included in the dispositional model of leader development participation. It is hypothesized:

Hypothesis 1: CSE will be positively related to goal quality.

However, the model displays an indirect relationship between CSE and feedback-goal correspondence. The hypothesized relationship between CSE and feedback-goal correspondence is discussed further in the next section.

CSE and Feedback-Goal Correspondence

To date, no studies examining the relationship between CSE and reactions to feedback have been published, and research on the effect of the manifest indicators of CSE on feedback produced contradictory results. For instance, research suggests that individuals with an internal locus of control are more likely than individuals with an external locus of control to accept responsibility for ineffective performance and persist on tasks in spite of negative feedback (Abramson, Seligman, & Teasdale, 1978; Basgall & Snyder, 1988; Rotter, 1966). Thus, locus of control research indicates that CSE may be positively related to feedback-goal correspondence. In contrast, other research suggests that individuals with high self-efficacy are more likely than low self-efficacy individuals to perceive negative feedback as inaccurate (Alden, 1986), indicating that CSE may be negatively related to feedback-goal correspondence.

In particular, multiple studies suggest that self-esteem plays an important role in the performance of individuals following negative feedback. That is, following negative feedback, it is clear that low self-esteem individuals tend to decrease their subsequent

efforts on the task, whereas negative feedback does not have this same detrimental affect on the efforts of individuals with high self-esteem (Bandura, 1986; Brockner, 1983; Brockner, Derr, & Laing, 1987; Dogson & Wood, 1998; Greenberg, Solomon, Pyszezynski, Rosenblatt, Burling et al., 1992; McFarlin, Baumeister, & Blascovich, 1984; Shrauger & Sorman, 1977). What is unclear is the etiology of the effects of self-esteem on responses to negative feedback.

On one hand, some suggest that negative feedback increases the motivation of high self-esteem individuals. To illustrate, McFarlin and Blascovich (1981) found that individuals with high self-esteem predicted better future performance on tasks in which they had failed then on tasks in which they succeeded. Especially in response to negative performance feedback, high self-esteem individuals persist longer at their tasks than do moderate or low self-esteem individuals (McFarlin, Baumeister, & Blascovich, 1984). Thus, this perspective suggests that negative feedback facilitates the performance of high self-esteem individuals as high self-esteem individuals respond by increasing their efforts in order to overcome their areas of weakness. On the other hand, other research suggests that individuals with high self-esteem have a tendency to reject and ignore negative feedback. Based on this perspective, high and low self-esteem individuals react differently to negative feedback because low self-esteem individuals accept the feedback, and give up on the task in response to the feedback, whereas high self-esteem individuals continue to persist despite cues that their performance is not good (Kaplan, 1986; Shrauger & Lund, 1975; Shrauger & Sorman, 1977). Specifically, this research suggests that high self-esteem individuals are less likely to search for feedback cues in their environment (Taylor, Fisher, & Ilgen, 1984; Weiss & Knight, 1980). Moreover, when

faced with negative feedback, individuals with high self-esteem are less likely to perceive the feedback as accurate (Baumgardner, Kaufman, & Levy, 1989; De La Ronde & Swann, 1993; Jussim, Yen, & Aiello, 1995; Kernis, Cornell, Sun, Berry, & Harlow, 1993; Robinson & Smith-Lovin, 1992; Shrauger, 1975; Shrauger & Kelly, 1988; Shrauger & Sorman, 1977; Swann, Griffin, Predmore, & Gaines, 1987; Sweeney & Wells, 1990).

Multiple theories have been offered to explain findings that self-esteem is negatively related to feedback acceptance. One explanation is that individuals with high self-esteem are less behaviorally plastic than individuals with low self-esteem. As a result, high self-esteem individuals are less likely to rely on feedback from others to determine their subsequent behavior (Brockner, 1988; Campbell, 1990). A second explanation is based on self-consistency theory (Shrauger, 1975). According to self-consistency theory, people strive to maintain a consistent self-image. Because high self-esteem individuals have a positive self-image, they are likely to perceive negative feedback as faulty because it does not correspond with their view of themselves. A third explanation involves the defense mechanisms that are related to the formation of self-esteem. Some research suggests that individuals with high self-esteem are able to form and maintain high self-esteem by rejecting negative feedback about themselves (Heimpel, Wood, Marshall, & Brown, 2002; Heatherton & Ambady, 1993; Tennen & Affleck, 1993). If so, then high self-esteem individuals would be more likely to reject negative feedback. Indeed, based on this explanation, the tendency to reject negative feedback is what causes high self-esteem in the first place.

Concordant with the defense mechanism explanation of high self-esteem, some authors have proposed that there are two types of high self-esteem: defensive high self-

esteem and healthy high self-esteem (Baumeister, Smart, & Boden, 1996; Schneider & Turkat, 1975). The defense mechanism explanation of self-esteem is related to defensive self-esteem. Individuals with defensive high self-esteem have an inflated view of their own qualities. That is, those with defensive high self-esteem are particularly good at scanning for information that contributes to their positive self-view and screening information that contradicts their positive self-view. Thus, when faced with criticism, people with defensive high self-esteem are particularly good at either ignoring the criticism or rationalizing the criticism as erroneous (e.g., "My boss doesn't know what he is talking about"; "I usually do better, but I didn't get much sleep last night"). In contrast, individuals with healthy high self-esteem tend to hold an unbiased appreciation of their own positive qualities.

Baumeister and colleagues (1996) recognize that most measures of self-esteem were created based on the assumption that high self-esteem is healthy self-esteem. Thus, Baumeister and colleagues suggested measuring narcissism along with self-esteem in order to differentiate healthy from defensive self-esteem. Indeed, research in this area has shown that partialling narcissism from self-esteem helps explain the responses of those with high self-esteem to negative feedback (Bushman & Baumeister, 1998; Meagher & Aidman, 2004; Smalley & Stake, 1996; Twenge & Campbell, 2003; Webster & Kirkpatrick, 2006). In one study, individuals were given negative feedback, and were then given the opportunity to rate the quality of the feedback and the feedback source. Unpartialled self-esteem predicted negative ratings and negative comments about feedback. However, when narcissism was partialled out of self-esteem, self-esteem no longer predicted critical responses to negative feedback (Smalley & Stake, 1996).

Similar to self-esteem, CSE represents people's general evaluations of their own self-worth. As with self-esteem, examining other factors along with CSE may help to clarify the relationship between CSE and feedback-goal correspondence. Pertaining to the current study, narcissism is a second dispositional variable examined in this study. Narcissism is included as a dispositional predictor of behavior in a leader development program not only because narcissism may help clarify CSE's relationship with the outcome variables, but also because narcissism has been identified as an important predictor of leader effectiveness. Furthermore, leader development programs may not be effective in addressing problems associated with a narcissistic personality. Narcissism is discussed in the next section.

Narcissism

Hogan and Kaiser (2005) note that it is important to distinguish between good and bad leadership, as "…good leadership promotes effective team and group performance…bad leadership degrades the quality of life for everybody associated with it" (p. 169). They highlight personality as an important predictor of good and bad leadership, and note that several of the borderline personality disorders described in the DSM-IV are related to bad leadership. Narcissism is one personality variable that is related to bad leadership (see also Blair, Hoffman, & Helland, in press ; Hogan, 1994; Kernberg, 1986; Kets de Vries & Miller, 1985; Helland & Blair, 2005)

Narcissism is a broad personality syndrome that includes a grandiose sense of self-importance, a need for admiration, and a lack of empathy (APA, 2000). According to the DSM-IV (APA, 2000), individuals are diagnosed with narcissistic personality disorder if they display any 5 of the following characteristics: 1) grandiose self-

importance, 2) fantasies of unlimited power, success, or ideal love, 3) a belief that they are special and should only associate with other special people, 4) require excessive admiration, 5) have a sense of entitlement, 6) exploit others, 7) lack empathy, 8) show excessive envy towards others, and 9) show arrogant behaviors or attitudes.

Scales that measure narcissism are typically based on the DSM-IV's definition of clinical narcissism. However, only extreme manifestations of these characteristics constitute clinical, pathological narcissism. Interest has increased in examining sub-clinical narcissism (e.g., non-pathological narcissism), or the manifestation of narcissism in individuals who are highly narcissistic in comparison to a normal population, but are still able to function psychologically, socially, and professionally (Blair, Hoffman, & Helland, in press ; Helland & Blair, 2005; Hogan, 1994; Kernberg, 1986; Kets de Vries & Miller, 1985; Paulhus, 1998; Paulhus & Williams, 2002; Sedikides, Campbell, Reeder, Elliot, & Gregg, 2002; Sedikides, Ruckich, Gregg, Kumashiro, & Rusbult, 2004). Researchers have examined how narcissism affects well-being (Raskin & Novacek, 1989; Sedikides, Ruckich, Gregg, Kumashiro, & Rusbult, 2004; Watson & Biderman, 1993), interpersonal interactions (Paulhus, 1998), religious beliefs (Wink, Dillon, & Fay, 2005), relationships (Kernberg, 1986), and reactions to negative feedback (Kernis & Sun, 1994; Smalley & Stake, 1996).

Mainstream interest has increased in examining how narcissism influences organizational behavior (*The Economist*, August 10, 2006). In particular, narcissism has been theoretically associated with unethical leadership (Hogan, 1994; Hogan & Kaiser, 2005). Hogan and colleagues (Hogan, Raskin, & Frazzini, 1990) estimate that between 60 to 75% of American workers report that the most stressful aspect of their job is their

immediate supervisor. Furthermore, narcissism has demonstrated an empirical relationship with ineffective management behaviors (Helland & Blair, 2005; Blair, Hoffman, & Helland, in press). Specifically, narcissism is negatively related to supervisor ratings of integrity and interpersonal effectiveness (e.g., interpersonal sensitivity, team building, confrontation effectiveness, and participation management; Blair, Hoffman, & Helland, in press). Furthermore, during interpersonal interactions, narcissistic individuals are more likely to control power and communication, falsify information, use threats and anecdotes instead of rationale, and generally alienate others (Helland & Blair, 2005). Kets de Vries and Miller (1985) see narcissism as the key to understanding unethical leadership.

In summary, narcissistic individuals in organizations may be in dire need of leader development as an intervention for their behavior. However, because narcissists are likely to be resistant to feedback from others (Helland & Blair, 2005; Kernberg, 1986; Kernis & Sun, 1994; Kets de Vries & Miller, 1985; Kohut, 1971; Smalley & Stake, 1996), it is likely that these programs are particularly ineffective for narcissistic individuals. The relationships between narcissism and the leader development criteria are discussed in the next sections.

Narcissism and Feedback-Goal Correspondence

Although leader development and education are often cited as a method to deal with ineffective leaders (Howell & Avolio, 1992), it is quiet likely that these programs are particularly ineffective for narcissists. That is, during the course of leader development, participants are typically given developmental feedback and it is expected that they will utilize the feedback to better their performance. However, one way that

narcissists are thought to maintain their unrealistically high self-images is by distorting or rejecting negative information about themselves (Kohut, 1971; Kernberg, 1986; Kets de Vries & Miller, 1985). More specifically, narcissism is associated with the tendency to engage in "splitting". That is, narcissistic individuals tend to see things as either all good or all bad (Kets de Vries & Miller, 1985). Because of the tendency to engage in splitting, narcissists tend to view those with whom they interact as either ideal or percusatory. Narcissists tend to not recognize the bad qualities in those whom they idealize, and they are unable to see the good qualities in those whom they dislike. It is this splitting behavior that contributes to the maintenance of the unrealistic high self-image of narcissists. Narcissistic individuals want to see themselves as good or ideal, and are threatened by any evidence of bad. Thus, in order to maintain an ideal self-image, narcissistic individuals must reject all evidence of their own negative qualities.

Multiple studies confirm the theoretical assertion that narcissists are unlikely to attend to or accept any feedback that is not positive. Specifically, narcissism is positively correlated with one-way control of communication (Helland & Blair, 2005). Thus, narcissistic individuals dominate their conversations in such a way that others do not have the opportunity to voice concerns or criticisms. Furthermore, following negative evaluation, narcissism is associated with the tendency to perceive the diagnostic technique as invalid, and the assessor as incompetent and disliked (Kernis & Sun, 1994; Smalley & Stake, 1996). Moreover, narcissists are more likely than non-narcissists to aggress against the source of the negative feedback (Bushman & Baumeister, 1998; Twenge & Campbell, 2003; Webster & Kirkpatrick, 2006). Indeed, Hogan (1994) posits that narcissism is one personality characteristic associated with ineffective leadership,

and that narcissistic individuals are also unlikely to acknowledge their shortcomings. However, the relationship between narcissism and reactions to leader development feedback has not been empirically examined. As narcissists tend to reject negative feedback, and as Hogan (1994) theorized that narcissists would also be resistant to developmental feedback provided during leader development, in this study it was expected that narcissism would be negatively related to the tendency to incorporate developmental feedback into leader development goals. Accordingly, it is hypothesized:

Hypothesis 2: Narcissism will be negatively related to feedback-goal correspondence.

However, evidence supporting a relationship between narcissism and goal quality is less conclusive. Narcissism has demonstrated an inconsistent relationship with general job performance, and narcissistic individuals' task motivation tends to be contingent upon situational factors. The narcissistic personality construct will be further discussed in the next section in order to better understand the possible relationship between narcissism and goal quality.

Narcissism and Goal Quality

Narcissists tend to see themselves as exceptional performers (Gabriel, Critelli, & Ee, 1994; John & Robins, 1994; Paulhus, 1998). However, the actual performance of narcissistic individuals appears to be contingent on situational characteristics (Raskin, 1980; Morf, Weir, & Davidov, 2000; Wallace & Baumeister, 2002). Because narcissistic individuals are motivated by a need to obtain external validation from others for their overly-positive view of themselves (Kernberg, 1975, 1986; Kohut, 1971), narcissists are most motivated to perform well when other people are able to observe their performance.

In a lab setting, the performance of highly narcissistic people was enhanced when the task provided the participants with a chance to "show-off"; the opportunity to "show-off" did not enhance the performance of individuals with low narcissism scores (Wallace & Baumeister, 2002). In a different lab study, high and low narcissism participants were either given feedback that emphasized performance goals (e.g., their performance in comparison to others) or learning goals (e.g., their performance in comparison to their own past performance). Highly narcissistic people reported that they experienced the most enjoyment from the performance-goal based feedback, whereas low narcissists reported the most enjoyment from the learning-goal based feedback (Morf, Weir, & Davidov, 2000). This research suggests that narcissistic individuals perform best in situations where their performance is evaluated, and that they are most motivated in situations where they are able to compete against others.

The research by Wallace and Baumeister (2002) and the research by Morf and colleagues (Morf, Weir, & Davidov, 2000) was based on the assumption that narcissists generally engage in performance opportunities in order to demonstrate their skills to others. Although this conceptualization of narcissism has been most frequently studied in the literature, some also speculate that there is a second type of behavior pattern associated with narcissistic personality. Although narcissism is generally associated with exhibitionistic and grandiose behavior, some narcissists also display atypical, timid behavior. Thus, recent conceptualizations of narcissism describe two types of narcissistic tendencies: overt narcissism and covert narcissism. Both covert and overt narcissists share some characteristics. Specifically, both covert and overt narcissists tend to engage in "splitting". Thus, both tend to reject negative feedback. Additionally, both have a

tendency to idealize some others, but to disregard and exploit those whom they do not idealize (Kets de Vries & Miller, 1985).

Importantly, both overt and covert narcissists maintain an exalted self-image. However, overt narcissists tend to take grandiose and ostentatious actions in order to make others confirm this image (Wink, 1991). That is, overt narcissists attempt to dominate and control those with whom they interact (Kets de Vries & Miller, 1985). Overt narcissists tend to engage in challenging tasks, believing that they will demonstrate their superiority to anyone willing to observe. In contrast, covert narcissists tend to be timid and insecure, and they try to avoid the trauma that they will certainly incur if others contradict their high self-image (Wink, 1991). When given a difficult task, covert narcissists have a tendency to display an aloof air of superiority, acting as if they are above the display of effort necessary to complete the task. In this way, covert narcissists are associated with an absence of zest for work (Kernberg, 1986).

For the present study, the nature of the relationship between narcissism and goal quality is unclear. That is, based on the conceptualization of overt and covert narcissism, it seems as though individuals displaying overt forms of narcissism would submit very challenging leader development goals: these individuals would engage in the opportunity to show-off their accomplishments to others. In contrast, individuals displaying covert forms of narcissism would be less likely to form challenging goals. Covert narcissists would see this task as a potential arena to show their incompetence to others. Unfortunately, the narcissism measures most frequently used in research do not distinguish covert and overt narcissism (Wink, 1991). In this study, it is recognized that some narcissists may have a tendency to engage in the leader development program by

submitting high quality leader development goals, whereas other narcissists may avoid the opportunity to set and obtain leader development goals.

To summarize, it is hypothesized that CSE will be positively related to goal quality, and it is hypothesized that narcissism will be negatively related to feedback-goal correspondence. It is expected that CSE will be indirectly related to feedback-goal correspondence: some individuals with high CSE will incorporate negative feedback into their goals, others will not. Similarly, it is expected that the relationship between narcissism and goal quality will be indirect: some narcissists will submit high quality leader development goals, other narcissists will not. The goal orientation dimensions are the mechanisms that are expected to mediate these relationships. The goal orientation construct is discussed further in the next section.

Goal Orientation

Goal orientation is a construct used to describe individuals' mental representations and approaches to achievement situations (Dweck, 1986; Dweck & Leggett, 1988). Originally, goal orientation was conceptualized as having a two-dimensional structure: learning goal orientation and performance goal orientation. Individuals with a learning goal orientation (LGO) tend to focus on obtaining competence by acquiring skills in order to master tasks. Individuals with a performance goal orientation (PGO) are concerned with proving their competency by obtaining favorable judgments and avoiding unfavorable judgments from others.

Individuals with a LGO differ from individuals with a PGO in their beliefs about ability, exertion of effort, and approach to tasks. More specifically, individuals with a LGO and individuals with a PGO have different implicit theories about the malleability

of ability (Dweck & Leggett, 1988). Individuals with a LGO tend to have an incremental theory of ability, believing that ability is malleable. Thus, these individuals take a learning approach to tasks, seeing task engagement as an opportunity to increase their competence and gain mastery over the domain. Those with a PGO tend to have an entity theory of ability. They see ability as fixed, thus they tend to take a performance approach to tasks and believe that their performance on tasks reflects their competence. When faced with failure, these individuals do not persist, as they do not associate increased effort with increased likelihood of succeeding at the task. Because of the belief that performance reflects ability, PGO individuals do not tend to engage in tasks in which they do not believe that they have a high probability of success.

Similarly, goal orientation is related to how individuals view outcomes associated with their efforts (Dweck & Leggett, 1988). For LGO individuals who see ability as malleable, effort leads to success. Thus, effort not only results in favorable outcomes on the task, but also prepares the individuals for future tasks by increasing their ability in the domain area. In contrast, PGO individuals see ability as fixed. Thus, they believe that exerting extra effort on a task does not increase the likelihood that they will succeed on the task. Furthermore, people with a PGO see effort expended on a task as a sign of low ability, because a high ability person would be able to accomplish the task without devoting a lot of effort to the task.

These different beliefs about ability malleability and effort affect how individuals with different goal orientations approach difficult tasks. LGO individuals see difficult tasks as opportunities to increase their skills – thus they tend to enjoy challenging tasks, proceed in spite of negative feedback, and increase effort in order to accomplish goals.

However, PGO individuals are particularly concerned with performing well on tasks, thus they are more likely to withdraw from tasks that are difficult out of fear that their incompetence will be demonstrated to others.

More recently, goal orientation has been conceptualized as having three dimensions (VandeWalle, 1997). LGO is the same in the three dimensional conceptualization as in the two dimensional conceptualization. However, PGO is divided into separate dimensions, distinguishing between those that approach tasks in order to validate their competence versus those that avoid tasks in fear that they will demonstrate their incompetence. Based on the 3-dimensional conceptualization, performance-prove goal orientation (PPGO) refers to the tendency to approach tasks in order to demonstrate ones ability to others, whereas performance-avoid goal orientation (PAGO) refers to the tendency to avoid performing on tasks in order to avoid failing in front of others. Research supports the 3-dimensional conceptualization of goal orientation (Brett & VandeWalle, 1999; Sideridis, 2005; VandeWalle, 1997). The 3-dimension conceptualization of goal orientation will be used in this study. Because this conceptualization is relatively new, much of the research discussed in this paper focuses on the distinction between LGO and PGO, without distinguishing between PPGO and PAGO. In this paper, PGO is used to refer to past research that did not distinguish between these dimensions. However, in the current study, PGO is treated as two separate dimensions: PPGO and PAGO.

There are several points that should be highlighted about goal orientation. First, goal orientation has conceptually been treated as a state characteristic, and it has been examined as a dispositional characteristic. Although there is some evidence that

situational cues do affect goal orientation (Ames, 1992), research by Button, Mathieu, and Zajac (1996) indicates that dispositional goal orientation affects state goal orientation. Button and colleagues are not alone in their dispositional approach to the examination of goal orientation (Brett & VandeWalle, 1999; VandeWalle & Cummings, 1997). In this study, goal orientation will be treated as a dispositional factor. Second, goal orientation is different from many other personality frameworks in that different goal orientation dimensions do not share a single continuum. Thus, an individual with a high LGO may also have a high PGO, showing a desire to master a task and at the same time wanting to prove this mastery to others (Button, Mathieu, & Zajac, 1996).

Just as dispositional goal orientation has been related to general response to feedback and goal choice (Austin & Vancouver, 1996; Brett & VandeWalle, 1999; Kanfer, 1994), it is expected that the three goal orientation dimensions will be directly related to each of the two goal criteria used in this study. The relationships between the goal orientation dimensions and goal quality and feedback-goal correspondence are discussed in the next section. In this study, it is hypothesized that the three goal orientation dimensions will be directly related to goal quality and feedback-goal-correspondence. LGO will be positively related to both goal quality and feedback-goal-correspondence, PPGO will be positively related to goal quality and negatively related to feedback-goal correspondence, and PAGO will be negatively related to both goal quality and feedback-goal correspondence. These relationships are discussed further in the next sections.

LGO and Leader Development Goals

LGO is associated with a general desire to acquire new skills, master new situations, and improve overall competence (Dweck, 1986; Dweck & Leggett, 1988). Characteristics of individuals with a LGO include a desire to work hard (VandeWalle, 1997), and an implicit belief that skills are malleable and that effort leads to performance (Dweck & Leggett, 1988). Previous research suggests that LGO is positively related to the formation of goals that involve skill refinement and new skill development (Brett & VandeWalle, 1999), and that individuals with a LGO are more likely than individuals with a PGO to effectively use feedback cues in order to improve performance (Miller, Behrens, Greene, & Newman, 1993; Sujan, Weitz, & Kumar, 1994; VandeWalle & Cummings, 1997). Furthermore, previous leader development research indicates that an implicit theory of skill malleability (Maurer, Mitchell, & Barbeite, 2002) and learning attitudes (Noe & Wilk, 1993) predicts participation in developmental activities. In sum, LGO is related to hard work on difficult tasks, a desire to develop and refine new skills, and the use of negative feedback in order to improve future performance. Accordingly, it is hypothesized that:

Hypothesis 3: LGO will be positively related to goal quality.

Hypothesis 4: LGO will be positively related to feedback-goal correspondence.

PPGO and Leader Development Goals

Individuals with a PPGO tend to approach tasks in order to demonstrate their skill capabilities to other individuals (VandeWalle, 1997). PPGO is associated with a fixed implicit theory of ability, thus individuals with PPGO believe that they cannot improve their performance in a skill area by exerting additional effort in that area. When given a

choice of numerous goals, PPGO is associated with the pursuit of goals that give the individual the opportunity to demonstrate their superior performance in comparison to others (Brett & VandeWalle, 1999). Like individuals with a LGO, individuals with a PPGO also choose goals that give them the opportunity to refine their skills. However, unlike those with an LGO, individuals with a PPGO do not tend to choose goals that give them the opportunity to learn new skills. Thus, individuals with a PPGO might work on skill areas in which they are already proficient, but they do not tend to choose to work on skill areas in which they have performed poorly in the past (Brett & VandeWalle, 1999). Additionally, past research suggests that PPGO is negatively related to feedback-seeking behavior (VandeWalle & Cummings, 1997). Furthermore, individuals with a PPGO are less likely than individuals with LGO to use negative feedback to improve their performance (Miller, Behrens, Greene, & Newman, 1993; Sujan, Weitz, & Kumar, 1994; VandeWalle & Cummings, 1997). Altogether, PPGO is related to a desire to demonstrate one's skills to others, but is not related to a desire to work hard to improve deficient skills or to learn new skills and competencies. It is hypothesized that in relation to leader development goals:

Hypothesis 5: PPGO will be positively related to goal quality

Hypothesis 6: PPGO will be negatively related to feedback-goal correspondence.

PAGO and Leader Development Goals

Individuals who have a PAGO tend to avoid difficult tasks out of a fear that their performance will demonstrate their incompetence on the task (VandeWalle, 1997). PAGO is positively related to test anxiety (Middleton & Midgley, 1997) and fear of negative evaluation (VandeWalle, 1997). Individuals with a PAGO are likely to

demonstrate defensive behavior if they think that their participation on a task will result in a demonstration of low skill (Button, Mathieu, & Zajac, 1996). Like PPGO, PAGO is also associated with a fixed theory of ability (Dweck & Leggett, 1988), a tendency to avoid feedback (VandeWalle & Cummings, 1997), and an ineffective use of self-regulatory behavior (Miller, Behrens, Greene, & Newman, 1993; Sujan, Weitz, & Kumar, 1994; VandeWalle & Cummings, 1997). Furthermore, past research has shown that individuals with PAGO tend to choose avoidant-type goals on difficult tasks. That is, when given a choice of numerous goals, individuals with PAGO tend to state that their goal is to avoid looking bad in front of others. These individuals do not tend to choose goals that involve skill refinement or improvement (Brett & VandeWalle, 1999). Overall, individuals with a PAGO tend to avoid engaging in tasks out of fear that they will demonstrate their incapability to others. They also tend to avoid feedback, and do not tend to use the feedback that they are given to improve their performance. It is expected that these characteristics of individuals with PAGO will affect the formation of leader development goals:

Hypothesis 7: PAGO will be negatively related to goal quality.

Hypothesis 8: PAGO will be negatively related to feedback-goal correspondence.

Altogether, the role of several dispositional factors in predicting leader development goal quality and feedback-goal correspondence has been discussed. It is hypothesized that the goal orientation dimensions will be directly related to goal quality and feedback-goal correspondence. It is also hypothesized that CSE will be positively related to goal quality, and that narcissism will be negatively related to feedback-goal correspondence. Arguments have also been forwarded for a relationship between CSE and feedback-goal

correspondence and for a relationship between narcissism and goal quality. However, these relationships are not expected to be direct. Rather, it is expected that the relationship between CSE and feedback-goal correspondence and the relationship between narcissism and goal quality will be mediated by the goal orientation dimensions. The mediating role of goal orientation in these relationships is discussed in the next section.

CSE, Narcissism, and Goal Orientation

It is expected that goal orientation will mediate CSE's and narcissism's relationships with the outcomes. It is expected that CSE will be positively related to LGO and PPGO, but negatively related to PAGO. In contrast, it is expected that narcissism will be negatively related to LGO and positively related to PPGO and PAGO. These relationships are discussed further in the next two sections.

The Relationship Between CSE and the Goal Orientation Dimensions

It is hypothesized that CSE is positively related to LGO and PPGO, and negatively related to PAGO. An unpublished study supports CSE's relationships with LGO and PAGO (Blair, Meriac, & Morris, 2007). Furthermore, these relationships are also supported by published research examining the manifest indicators of CSE and goal orientation.

Consistent with past research, CSE and LGO should be positively related. Specifically, past research has shown that LGO is positively related to locus of control (Brett & VandeWalle, 1999; Button, Mathieu, & Zajac, 1996) and self-efficacy (Phillips & Gully, 1997), and in an unpublished study, CSE was positively related to LGO (Blair, Meriac, & Morris, 2007). Furthermore, CSE and LGO are similarly related to outcomes.

That is, CSE and LGO are both positively related to effort expended on tasks (Erez & Judge, 2001; VandeWalle, Cron, & Slocum, 2001) and willingness to work hard (Erez & Judge, 2001; VandeWalle, 1997). In addition, individuals with high CSE (Judge, Bono, Erez, & Locke, 2005) and individuals with a general LGO (Dweck, 1986; Dweck & Leggett, 1988) tend to approach rather than avoid difficult tasks. Accordingly, it is hypothesized:

Hypothesis 9: CSE will be positively related to LGO.

CSE should also be positively related to PPGO. Like individuals with high CSE, individuals with a PPGO tend to approach (rather than avoid) difficult tasks (VandeWalle, 1997). Furthermore, Brett and VandeWalle (1999) referred to differences in self-evaluation as a means to distinguish individuals with a PPGO from individuals with a PAGO. Specifically, Brett and VandeWalle (1999) stated, "Separating the performance goal orientation into prove and avoid dimensions captures the distinction between positive and negative self-evaluation. It is likely that these two performance dimensions have distinct implications for how individuals view a task and the types of goals they set in doing so" (p. 865). Nevertheless, unpublished research reported a non-significant relationship between CSE and PPGO (Blair, Meriac, & Morris, 2007). However, the unpublished research findings were based on a sample size of less than eighty individuals. In this study, it is hypothesized:

Hypothesis 10: CSE will be positively related to PPGO.

Finally, it is expected that CSE will be negatively related to PAGO. The negative relationship between CSE and PAGO is supported by Brett and VandeWalle's (1999) theory that individuals with PAGO tend to have a negative view towards the tasks on

which they work and their ability to accomplish the tasks. Furthermore, research examining PAGO and various manifest indicators of CSE also suggests that PAGO will be negatively related to CSE. In particular, PAGO is related to neuroticism and a lack of self-assuredness about one's abilities (Middleton & Midgley, 1997). Moreover, PAGO and CSE are similarly related to outcomes. Similar to individuals with a PAGO (Brett & VandeWalle, 1999; Middleton & Midgley, 1997; VandeWalle, 1997), individuals with low self-esteem tend to over generalize the implications of their failures (Brown & Dutton, 1995) and CSE is inversely related to the experience of anxiety and stress (Blair, Meriac, & Morris, 2007; Judge, Erez, Bono, & Thoresen, 2002). Accordingly, it is hypothesized:

Hypothesis 11: CSE will be negatively related to PAGO.

In sum, CSE is expected to be positively related to LGO and PPGO, and negatively related to PAGO. The goal orientation dimensions should also be related to narcissism. In the next section, hypotheses are offered regarding the relationships between narcissism and LGO, PPGO, and PAGO.

The Relationship Between Narcissism and the Goal Orientation Dimensions

It is hypothesized that narcissism is negatively related to LGO, and positively related to PPGO and PAGO. Like CSE research, narcissism researchers have eluded to a relationship between narcissism and goal orientation (Morf, Weir, & Davidov, 2000; Wallace & Baumeister, 2002), even though these relationships have not been directly examined. That is, narcissism research suggests that narcissistic individuals are more likely to "…care about how they appear than what they feel (p. ix; Lowen, 1983)." Moreover, empirical research has demonstrated that narcissists are more likely to perform

better on tasks with a performance outcome than a mastery outcome (Wallace & Baumeister, 2002), and are more likely to find more intrinsic satisfaction in performance-oriented tasks than mastery-oriented tasks (Morf, Weir, & Davidov, 2000). Thus, these studies suggest that narcissism will be negatively related to LGO and positively related to PPGO and PAGO. Furthermore, the philosophies of narcissistic individuals most closely align with the philosophies of individuals with a PPGO or PAGO, and are most dissimilar to individuals with a LGO. That is, like individuals with a PPGO, narcissistic individuals see tasks as a means to demonstrate grandiosity (Wallace & Baumeister, 2002), thus, when failing at a task, narcissistic individuals are more likely to give up, out of fear that their performance will be interpreted by others as a lack of superiority. It is hypothesized:

Hypothesis 12: Narcissism will be negatively related to LGO.

Hypothesis 13: Narcissism will be positively related to PPGO.

Hypothesis 14: Narcissism will be positively related to PAGO.

In summary, it is hypothesized that LGO will be positively related to CSE and negatively related to narcissism, PPGO will be positively related to CSE and narcissism, and PAGO will be negatively related to CSE and positively related to narcissism. The mediating role of goal orientation in the dispositional model of leader development is discussed in the next section.

The Mediating Role of Goal Orientation

As shown in Figure 1, the relationship between CSE and feedback-goal correspondence and the relationship between narcissism and goal quality is expected to be mediated by the goal orientation dimensions.

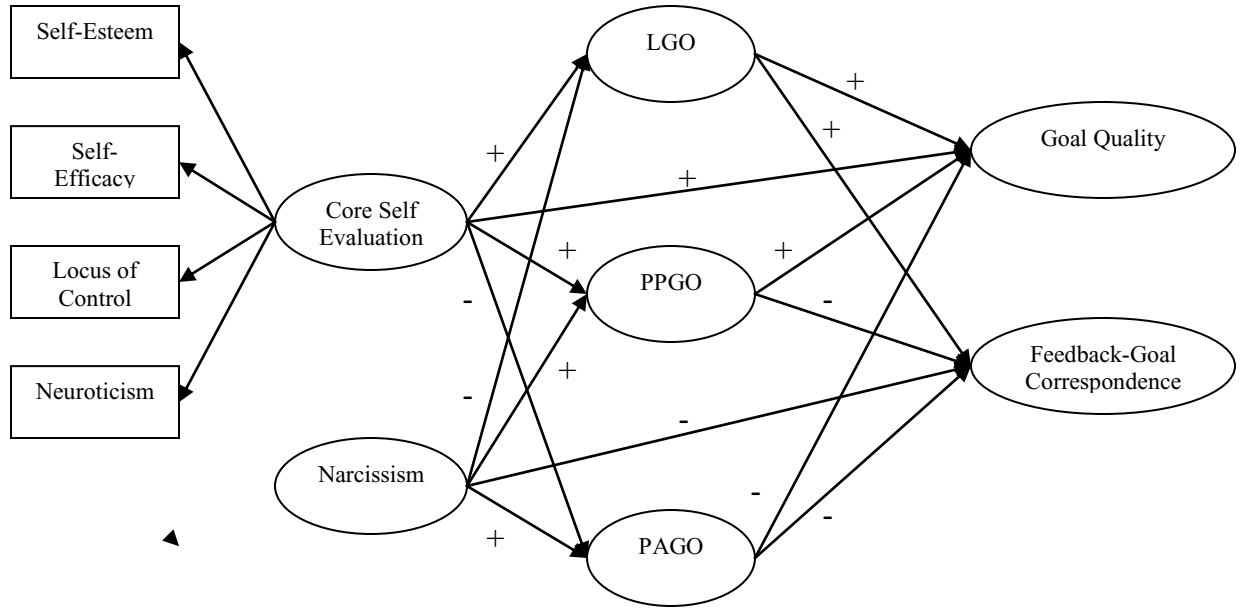

Figure 1. The a priori hypothesized model.

To elaborate, CSE should be negatively related to PAGO, and PAGO should also be negatively related to feedback-goal correspondence. However, it is expected that CSE will be positively related to both LGO and PPGO; it is hypothesized that LGO is positively related to feedback-goal correspondence and PPGO is negatively related to feedback-goal correspondence. Examining goal orientation should help clarify why some high CSE individuals incorporate feedback into their goals and others do not. In this way, the goal orientation dimensions mediate the relationship between CSE and feedback-goal correspondence. Thus, it is hypothesized:

Hypothesis 15: The relationship between CSE and feedback-goal correspondence will be mediated by LGO and PPGO.

It is also expected that the goal orientation dimensions mediate the relationship between narcissism and goal quality. In particular, it is expected that narcissism will be negatively related to LGO, and LGO will be positively related to goal quality. It is also expected that narcissism will be positively related to both PPGO and PAGO; however, PPGO should be positively related to goal quality, whereas PAGO should be negatively related to goal quality. Accordingly, the goal orientation dimensions clarify the relationship between narcissism and goal quality by clarifying why some narcissistic individuals submit authentic leader development goals and others do not. It is hypothesized:

Hypothesis 16: The relationship between narcissism and goal quality will be mediated by PPGO and PAGO.

Potential Control Variables

Several other factors not included in the hypotheses may also influence goal quality and feedback-goal correspondence. For example, conscientiousness is related to

goal setting (Judge & Ilies, 2002) and feedback acceptance (Anderson & Jones, 2000). Similarly, cognitive ability is associated with general performance and task motivation (Hunter & Hunter, 1984; Schmidt, Ones, & Hunter, 1992). Finally, the tendency to seek feedback and process it mindfully is theoretically related to feedback acceptance (London & Smither, 2002). Accordingly, the effect of conscientiousness, critical thinking ability, and past feedback and development experiences on the study criteria will also be examined.

The Hypothesized Model

CSE, narcissism, and goal orientation are variables that have previously been linked to the behavior of leader development participants. The purpose of this study is to examine how these dispositional factors influence the formation of quality leader development goals, and to examine how personality influences the correspondence between leader development feedback and leader development goals. Figure 1 displays the hypothesized model linking CSE and narcissism to goal orientation, leader development goal quality, and leader development feedback-goal correspondence. Consistent with previous CSE research (Judge et al. 1998, 2002, 2005), CSE is treated as a latent construct indicated by self-esteem, self-efficacy, locus of control, and neuroticism. As stated in the hypotheses, there is a positive link between CSE and goal quality (H1) and a negative link between narcissism and feedback-goal correspondence (H2). Furthermore, LGO is positively related to both of the goal criteria (H3 and H4), PAGO is negatively related to the goal criteria (H7 and H8), and PPGO is positively related to goal quality (H5) and negatively related to feedback-goal correspondence (H6).

It is hypothesized that the goal orientation dimensions mediate the relationship between CSE and feedback-goal correspondence, and it is hypothesized that the goal orientation dimensions mediate the relationship between narcissism and goal quality. Specifically, it is expected that low CSE participants will also have PAGO (H11), and PAGO will be negatively related to feedback-goal correspondence. CSE is positively related to both LGO and PPGO (H9 and H 10); however, LGO is positively related to feedback-goal correspondence and PAGO is negatively related to feedback-goal correspondence. In this way, LGO and PPGO mediate the relationship between CSE and feedback-goal correspondence (H15).

Likewise, it is hypothesized that the goal orientation dimensions mediate the relationship between narcissism and goal quality. Narcissism is positively related to both PPGO and PAGO (H13 and H14), and inversely related to LGO (H12). It is expected that narcissism will be inversely related to LGO, and LGO will be positively related to goal quality. Narcissism is hypothesized to be positively related to PPGO and PAGO; PPGO should be positively related to goal quality, whereas PAGO should be negatively related to goal quality. Thus, it is expected that PPGO and PAGO mediate the relationship between narcissism and goal quality (H16). The hypotheses are summarized in Table 1. Other variables that will be examined and potentially controlled for in this study include conscientiousness, critical thinking ability, and past feedback and leader development experience.

Table 1
Summary of Study Hypotheses

Hypothesis Number	Hypothesis Tenet
1	CSE will be positively related to goal quality.
2	Narcissism will be negatively related to feedback-goal correspondence.
3	LGO will be positively related to goal quality.
4	LGO will be positively related to feedback-goal correspondence.
5	PPGO will be positively related to goal quality.
6	PPGO will be negatively related to feedback-goal correspondence.
7	PAGO will be negatively related to goal quality.
8	PAGO will be negatively related to feedback-goal correspondence.
9	CSE will be positively related to LGO.
10	CSE will be positively related to PPGO.
11	CSE will be negatively related to PAGO.
12	Narcissism will be negatively related to LGO.
13	Narcissism will be positively related to PPGO.
14	Narcissism will be positively related to PAGO.
15	The relationship between CSE and feedback-goal correspondence will be mediated by LGO and PPGO.
16	The relationship between narcissism and goal quality will be mediated by PPGO and PAGO.

CHAPTER II

Methods

The data used in this study was archival in nature. The analyses were based on data collected from individuals enrolled in executive MBA programs between January 2006 and December 2007. As the data used in this study was archival in nature, there was a limited sample size available, and there were limitations on the scales and measures that could be used for analyses. Typical to research in leader development (e.g., Ryan, Brutus, Greguras, & Hakel, 2000), it was difficult to add additional measures in an already assessment-laden program. Despite the lack of theoretical control over the measures and feedback provided in the leader development program, this research study makes an important contribution to the sparse leader development literature.

Participants and Procedure

The sample consisted of 119 participants in a leadership development program at a large university in the southeast United States. The leadership development program is a curriculum requirement for completion of the executive MBA degree. As the MBA program is for executives, the participants hailed from a number of different fields (e.g., medical; engineering; manufacturing; shipping), had a variety of job positions (e.g., sales manager; head physician; production manager), and had a substantial number of years of supervisory experience (M = 9.06, SD= 7.61). The majority of the sample was male (85%). All of the participants had at least a bachelor's degree, and a proportion of the participants had previously obtained graduate degrees.

The executives completed various inventories prior to enrolling in the program, including several personality inventories, several demographic items, and a

developmental multiple rater assessment. The personality measures used in this study were collected as part of the leader development program personality assessment. The multiple rater assessment was completed by the individual participant, their supervisor, three to five peers, and three to five subordinates. The multiple rater sources were asked to answer approximately 80 Likert-type items, providing feedback to the participant on 17 performance dimensions. The sources were also asked to answer four open-ended questions. From the multiple rater assessment, the participants received graphical feedback on the 17 performance dimensions, as well as copies of the open-ended feedback provided by themselves and others. Importantly, although the multiple rater quantitative feedback was separated into four different sources (e.g., self, supervisor, peer, subordinate), the open-ended feedback from others was not separated into different sources.

During their first week of residence in the program, the students also participated in a one-half day developmental assessment center. The assessment center consisted of three to four exercises (i.e., a role play exercise, a role play memo exercise, a group decision making task, and an in-basket exercise), and the participants received feedback in 14 different performance dimensions. Approximately 6 weeks after enrolling in the program, the students received a binder including their multiple rater quantitative feedback, multiple rater open-ended comment feedback, and assessment center feedback. The students were instructed to review the feedback that they received from themselves, their supervisor, their peers, their subordinates, and the assessment center staff. The participants were then instructed to form approximately four goals to be addressed during the duration of the one year leader development program (see Appendix A). They were

assigned a leader development facilitator (or coach), and they were instructed to meet with this individual during subsequent on-campus residence periods, and to have email and telephone contact with the individual throughout the MBA program. The facilitator was to assist the individuals in interpreting and synthesizing their feedback, provide them with guidance in meeting their goals, and monitor their progress towards goal completion. The initial leader development goals submitted to the leader development facilitators were used to calculate scores on the two criteria used in this study: goal quality and feedback-goal correspondence.

Predictor Measures

Core Self-Evaluation

Consistent with prior research (Judge et al., 1998, 2005), the core self-evaluation (CSE) concept was measured with four scales. The instructions and items included in the CSE scale are displayed in Figure 2. The CSE measure consisted of a 10 item measure of self-esteem (Rosenberg, 1965, 1989), an 8 item measure of self-efficacy (Judge, Locke, Durham, & Kluger, 1998), an 8 item measure of Locus of Control (Levenson, 1981), and a 12 item measure of Neuroticism (Eysenck & Eysenck, 1968a). The scale used for the responses to the items were anchored on a five point Likert-type scale (1 = Strongly Disagree to 5 = Strongly Agree). It was necessary to reverse the scores of eleven items on the scale prior to subsequent analyses. The items within each scale were averaged to form a single score for self-esteem, self-efficacy, locus of control, and neuroticism. Consistent with past practices (Judge, Locke, Durham, & Kluger, 1998; Judge, Bono, Erez, & Locke, 2005), and consistent with theoretical explorations in this area (Judge, Erez, Bono, & Thoreson, 2002), the four scales were treated as manifest indicators of CSE as a

Instructions: Before making your rating, think about the behaviors that you display at work. Next, indicate your level of agreement with each statement using the scale listed below by circling your response on this sheet.

1 = Strongly disagree

2 = Slightly disagree

3 = Neither agree nor disagree

4 = Slightly agree

5 = Strongly agree

6 = Do not know

Self-Esteem Scale (Rosenberg, 1965)

1. I feel that I am a person of worth, at least on an equal basis with others.
2. I feel that I have a number of good qualities.
3. All in all, I am included to feel that I am a failure. ®
4. I am able to do things as well as most other people.
5. I feel that I do not have much to be proud of. ®
6. I take a positive attitude toward myself.
7. On the whole, I am satisfied with myself.
8. I wish I could have more respect for myself. ®
9. I certainly feel useless at times. ®
10. At times, I think I am no good at all. ®

Generalized Self-Efficacy (Judge, Locke, Durham, & Klugar, 1998)

1. I am strong enough to overcome life's struggles.
2. At root, I am a week person. ®
3. I can handle the situations that life brings.
4. I usually feel that I am an unsuccessful person. ®
5. I often feel that there is nothing that I can do well. ®
6. I feel competent to deal effectively with the real world.
7. I often feel like a failure. ®
8. I usually feel I can handle the typical problems that come up in life.

Locus of Control (Levenson, 1981)

1. Whether or not I get to be a leader depends mostly on my ability.
2. When I make plans, I am almost certain to make them work.
3. When I get what I want, it's usually because I'm lucky. ®
4. I have often found that what is going to happen will happen. ®
5. I can pretty much determine what will happen in my life.
6. I am usually able to protect my personal interests.
7. When I get what I want, it's usually because I worked hard for it.
8. My life is determined by my own actions.

Figure 2. The core self-evaluation measure (Judge et al., 1998, 2005). In the measure that the students received, the items appeared in random order, and the Likert-type options were listed at the end of each item. ® represents items that were reverse scored.

Neuroticism (Eysenck & Eysenck, 1968a)

1. My feelings are easily hurt.
2. I'm a nervous person.
3. I'm a worrier.
4. I am often tense or "high strung".
5. I often suffer from "nerves".
6. I am often troubled by feelings of guilt.
7. My mood often goes up and down.
8. Sometimes I feel miserable for no reason.
9. I am an irritable person.
10. I often feel fed up.
11. I often worry too long after an embarrassing experience.
12. I often feel lonely.

Figure 2. Continued.

latent construct. In past studies, these measures of self-esteem, self-efficacy, locus of control, and neuroticism have demonstrated acceptable internal consistency estimates (α = .88, .85, .78, .89, respectively; Judge, Bono, Erez, & Locke, 2005). The internal consistency estimates for the self-esteem, self efficacy, and neuroticism scales were also acceptable in the current study (α = .82, .78, .91, respectively). Based on item analysis, one item was deleted from the locus of control scale (i.e., "I have often found that what is going to happen will happen"). Deleting the item increased the internal consistency estimate for locus of control (α = .58). Overall, internal consistency for the core self-evaluation scale was .92.

Narcissism

Wink and Gough's (1990) narcissism scale from the California Psychological Inventory (CPI) was used in this study. This scale was developed to capture narcissism in non-clinical populations (Wink & Gough, 1990). Respondents answered "true" or "false" for each of the 49 items. Wink and Gough (1990) have demonstrated construct validity for their Narcissism scale. The CPI-narcissism scale has demonstrated acceptable internal consistency in past studies (α = .78) and in the current study (α = .80). The CPI is a copyrighted assessment instrument, thus the scale items were not included in this document.

Goal orientation

VandeWalle's (1997) 13 item self-report questionnaire was used to measure goal orientation. The goal orientation instructions and items are included in Figure 3. This measure provides an estimate of the three goal orientation subscales: a 5 item measure of learning goal orientation (LGO), a 4 item measure of performance-prove goal orientation

Instructions: Before making your rating, think about the behaviors that you display at work. Next, indicate your level of agreement with each statement using the scale listed below by circling your response on this sheet.

1 = Strongly disagree

2 = Slightly disagree

3 = Neither agree nor disagree

4 = Slightly agree

5 = Strongly agree

6 = Do not know

Learning Goal Orientation

1. I am willing to select a challenging work assignment that I can learn a lot from.
2. I often look for opportunities to develop new skills and knowledge.
3. I enjoy challenging and difficult tasks at work where I'll learn new skills.
4. For me, development of my work ability is important enough to take risks.
5. I prefer to work in situations that require a high level of ability and talent.

Prove (performance goal) orientation

1. I'm concerned with showing that I can perform better than my coworkers.
2. I try to figure out what it takes to prove my ability to others at work.
3. I enjoy it when others at work are aware of how well I am doing.
4. I prefer to work on projects where I can prove my ability to others.

Avoid (performance goal) orientation

1. I would avoid taking on a new task if there was a chance that I would appear rather incompetent to others.
2. Avoiding a show of low ability is more important to me than learning a new skill.
3. I'm concerned about taking on a task at work if my performance would reveal that I had low ability.
4. I prefer to avoid situations at work where I might perform poorly.

Figure 3. The Goal Orientation Measure (VandeWalle, 1997). In the measure that the students received, the items appeared in random order, and the Likert-type options were listed at the end of each item.

(PPGO), and a 4 item measure of performance-avoid goal orientation (PAGO). These items were measured with a five point Likert-type response scale (1 = Strongly Disagree, 5 = Strongly Agree). The arithmetic means of the items associated with each subscale were calculated. Past research supported the 3-factor structure of this scale (VandeWalle, Cron, & Slocum, 2001). Furthermore, past studies have shown acceptable internal consistency estimates for LGO, PPGO, and PAGO (α = .78, .81, and .88, respectively; Brett & VandeWalle, 1999). In this study, LGO, PPGO, and PAGO each demonstrated acceptable internal consistency (α =.78, .67, .85, respectively).

Control Variables

Conscientiousness

The responsibility scale from the California Psychological Inventory (CPI) was used as a measure of conscientiousness and responsibility. The scale includes 35 items that measure individual willingness to accept the consequences of one's own behavior, dependability, trustworthiness, and a sense of obligation to others. In past research, high scores on the responsibility scale were related to performing well on tasks under unobserved conditions, self-discipline, and reliability (Gough & Bradley, 2002; Weeks, 1993). The CPI is a copyrighted assessment instrument, thus the items used to measure responsibility were not included in this document. Internal consistency of the responsibility scale was acceptable (α = .71).

Critical Thinking Ability

Critical thinking ability was measured with the Watson-Glaser Critical Thinking Ability Appraisal – Form A (CTA, Psychological Corporation, 1980). The instrument consists of 80 items, formatted as a mixture of true-false, multiple-choice, and likert-

response items. The items are designed for individuals at a reading level of ninth grade or higher. The CTA is divided into five sections: 1) fact based conclusions, 2) assumption detection, 3) deduction, 4) fact-based interpretation, and 5) argument strength. As critical thinking was being used as a control variable in this study, the overall CTA score was used in the analyses. Studies on the CTA have provided evidence for the test's reliability and validity (Psychological Corporation, 1980). Item level data was not available for the CTA in the current study.

Past Feedback and Leader Development Experience

Past feedback and leader development experience was determined based on several demographic items answered by the participants regarding their past feedback and development experience (Figure 4). Only 88 of the participants completed the requested demographic items. Of these, the majority had not previously received feedback from subordinates or peers (41% and 38%, respectively). However, the majority of the participants had previously received feedback from managers (75%). The first three of the items regarding past feedback experience were summed to form an indicator of past feedback experience. The sum was used in subsequent analyses (M = 1.55, SD= 1.16).

Most of the participants had voluntarily attended a workshop or development opportunity in the past year (81%), and a percentage of the participants had voluntarily attended more than three training sessions or developmental workshops (24%). In 1% of the cases (N=1), the value reported by the participant was extremely high in comparison to the other participants. The outlying value was replaced with the value that corresponded with the upper end of the inlaying values. The majority of the respondents reported spending 10 or more hours each year in voluntary training and development

Have you ever received written performance feedback from your employees/staff?	_____
Have you ever received written performance feedback from your peers?	_____
Have you ever received written performance feedback from your managers?	_____
How many professional or personal workshops, courses, or seminars have you voluntarily attended in the last year?	_____
Give your best estimate of the # of hours you tend to spend in voluntary training and development activities each year.	_____

Figure 4. Past feedback and development experience.

(89%). For 6% of the cases (N = 6), extreme outlying values were replaced with the upper range value for the majority of participants. The last two items were treated as two independent items and were also included in subsequent analyses.

Outcome Measures

Quality of the Leader Development Goals

Each of the participants' goals was rated for goal quality. Based on goal theory, effective goals are related to performance improvement. Effective goals are those that are 1) difficult but attainable, and 2) accompanied with a specific action plan for goal achievement (Locke & Latham, 1990). In this study, the quality of each of the submitted goals was rated based on the degree to which they meet these two characteristics of effective goals.

In the study, two subject matter experts (SME) rated the quality of the leader development goals. The first SME was the author of the dissertation. The second SME was a recent graduate of the Industrial/Organizational Psychology doctoral program and had worked as a leader development coach. The two SMEs each had more than four years experience working with the leader development program, each had participated and led an annual 12 hour frame-of-reference training for leader development assessors, and both had worked as facilitators for the leader development program.

Similar to the methods used by Reichard (2006), a seven-point Likert scale was used to examine the degree of difficulty and specificity of each of the submitted goals (Figure 5). For goal difficulty, the SMEs assessed each of the submitted goals and sub-goals. Because the purpose of the leader development goals was self-development, goal difficulty was determined based on the degree of expected behavior change if the goal

Rater initials: _
Student ID #: _

Please read the entire leader development plan, then complete this rating sheet based on an overall assessment of the leader development plan.

Goal # 1		Category:			Specified by student:	Y	N
Goal Difficulty:	1	2	3	4	5	6	7
Goal Specificity:	1	2	3	4	5	6	7
Goal # 2		Category:			Specified by student:	Y	N
Goal Difficulty:	1	2	3	4	5	6	7
Goal Specificity:	1	2	3	4	5	6	7
Goal # 3		Category:			Specified by student:	Y	N
Goal Difficulty:	1	2	3	4	5	6	7
Goal Specificity:	1	2	3	4	5	6	7
Goal # 4		Category:			Specified by student:	Y	N
Goal Difficulty:	1	2	3	4	5	6	7
Goal Specificity:	1	2	3	4	5	6	7
Goal # 5		Category:			Specified by student:	Y	N
Goal Difficulty:	1	2	3	4	5	6	7
Goal Specificity:	1	2	3	4	5	6	7
Goal # 6		Category:			Specified by student:	Y	N
Goal Difficulty:	1	2	3	4	5	6	7
Goal Specificity:	1	2	3	4	5	6	7
Goal # 7		Category:			Specified by student:	Y	N
Goal Difficulty:	1	2	3	4	5	6	7
Goal Specificity:	1	2	3	4	5	6	7

Figure 5. Goal Quality Measure.

were completed. Thus, the SME assessments were based on a scale ranging from 'attainment of this goal would require substantial additional effort on the part of the participant' (seven) to 'attainment of this goal would not require any additional effort on the part of the participant.' (one). Furthermore, rather than submitting goals, some individuals submitted statements of their personal philosophies or typical behaviors (e.g., 'I am very involved in my church'). These statements also received 1's on the goal difficulty scale. Prior to the actual study, the two SMEs met and agreed on a frame-of-reference to differentiate the high-quality goals and the low-quality goals. Examples of goals of high and low quality on the goal difficulty dimension are presented in Figure 6, and a measurement scale for goal difficulty is presented in Figure 7.

The SMEs also rated each of the submitted goals for goal specificity based on a scale ranging from 'the goal is specific' (seven) to 'the goal is vague' (one). Goal specificity was assessed based on the specificity of the overarching goal and accompanying sub-goals, as well as the amount of detail given to the deadlines, available resources, and indicators of goal completion. Examples of goals of high and low quality on the goal specificity item are presented in Figure 8, and a measurement scale for goal specificity is presented in Figure 9. After creating a frame-of-reference for the goals, the two SMEs practiced rating several leader development goals until they were able to consistently agree on the ratings for goal difficulty and goal specificity.

Three measures were employed in order to assess agreement between the two raters for each of the two items: interclass correlation coefficient (ICC), average difference scores, and percent agreement. For the goal difficulty item, the interclass correlation coefficient fell slightly short of acceptable agreement between the two raters

Not difficult	I have placed a very high priority on raising my children. They are growing into fine, well rounded, and well educated adults. I have always placed my priority away from myself and I am very happy as a result. Keeping my focus on others is always going to be my goal. I enjoy working in the community for the common welfare.
Still not difficult	Analyze and assess a competitor. • Review various reports and documents. • Benchmark innovative practices used by the park. • My with a peer to review findings of the analysis.
A little more difficult	Improve my intellectual health. • Complete all of the assigned MBA readings. • Create a reading list of books that I would like to read after finishing the MBA program.
Getting more difficult	Improve my ability to handle stress. • Read a short book on managing stress. • Do light exercise activity 1 time every 2 weeks. • Participate in my hobby, flying kites, 1 time every 2 weeks. • Achieve a minimum of 6 hours of sleep 4 times per week.
Still more difficult	Spend more quality time with my family. • Spend at least 15 hours per week of non-TV time with my family. • Have 1 date night per month with my wife. • Spend time each day I am home with my daughter doing her favorite things. For now, that's still crawling on the floor… • Visit my parents and in-laws one time per month.
Even more difficult	Be persuasive within meetings, not confrontational. • Preface my criticisms with praise. • Be friendly and build rapport prior to the start of meetings. • Actually listen to others arguments. Sit-up straight, avoid interrupting, and concentrate on others' messages rather than my next argument. • Lay out the rationale for my arguments and use when appropriate. Also be willing to recognize when others are more correct that I.
Most difficult	Improve my strategic planning skills and focus less on day-to-day operations of my job. • Delegate more day-to-day tasks to my direct reports. • Be more selective in accepting invitations to meetings. • Put time in my calendar to be used for strategic planning. • Frequently meet with my boss to set long term priorities. • Work on a succession plan and pick a successor. • Attend more industry wide events and seek more speaking engagements.

Figure 6. Examples of Goal Difficulty.

1	Attainment of this goal would not require any additional effort on the part of the participant.
2	
3	Attainment of this goal would require a minimal amount of additional effort on the part of the participant.
4	
5	Attainment of this goal would require a moderate amount of additional effort on the part of the participant.
6	
7	Attainment of this goal would require a substantial amount of additional effort on the part of the participant.

Figure 7. Anchors for Rating Goal Difficulty.

Least Specific	Increase general self-confidence. [no further information provided]
More Specific	Increase self-confidence when speaking in front of others. Deadline: Ongoing. Steps for goal completion: A. Tell myself that the group isn't as critical as I imagine. Deadline: Ongoing Available resources: [none listed]. B. Take opportunities to speak in front of others. Deadline: Ongoing Available resources: Peers. Conferences. C. Practice before making presentations. Deadline: Ongoing Available resources: My hallway mirror. D. Do not get stressed before meetings. Deadline: Ongoing until I am more comfortable Available resources: My own reasoning skills. Strengths that I can leverage to complete this goal: [none listed]. How I will monitor my progress: Consistently ask others for feedback. Reward for completing this goal: A vacation How I will know when I've completed this goal: I will feel better.

Figure 8. Examples of Goal Specificity.

Most Specific	Increase self-confidence and level of assertiveness when speaking in front of a group. Deadline: December Steps for goal completion: A. Join Toastmasters International. Deadline: This month Available resources: There is a group that meets at a restaurant near my office. B. Schedule opportunities to speak in front of individuals either subordinate or at the same level as myself. Deadline: This summer Available resources: Our company has brown-bag lunches. I need to offer a training in a statistical package used by my group. I will also sign-up to teach a night course at a community college. I will also arrange to make a personal presentation at church. C. Schedule opportunities to speak in front of superiors or unknown colleagues. Deadline: December Available resources: I will submit a two papers at our trade conference. I will also sign-up to make a presentation at our annual company dinner. D. For now, prepare all presentations in advance and practice informally before the presentation. Deadline: Ongoing until I am more comfortable Available resources: My planning skills. My spouse will be my practice audience. Strengths that I can leverage to complete this goal: Planning skills. How I will monitor my progress: Consistently ask others for feedback. Reward for completing this goal: If I have completed all of the steps, I will buy my entire toastmasters club a round of dessert at our December meeting. How I will know when I've completed this goal: I will not feel so awkward when speaking in front of others. My messages will be well received.

Figure 8. Continued.

1	The goal and goal details are very vague.
2	
3	The goal and goal details are somewhat vague.
4	
5	The goal and goal details are somewhat specific.
6	
7	The goal and goal details are very specific.

Figure 9. Anchors for Rating Specificity.

(ICC = .69). Nevertheless, the average difference between the raters was less than one point (M = .64, sd = .68). Furthermore, the raters demonstrated exact agreement on the goal difficulty item on 45% of their ratings, and differed by only one point on 48% of their ratings. In instances in which the two raters differed by more than one point, the two raters discussed their ratings in order to reach a consensus regarding the goal difficulty score. After consensus, the interclass correlation coefficient showed acceptable agreement between the two raters (ICC = .82). Subsequently, ratings for the two raters were averaged to form a single difficulty score for each goal (*M* = 3.04, *SD*= .82).

For the specificity item, the interclass correlation coefficient showed acceptable agreement between the two raters based on the pre-consensus ratings (ICC = .87), and the average difference between the raters was also less than one point (M = .51, sd = .58). Furthermore, the raters demonstrated exact agreement on the goal specificity item on 53% of their ratings, and differed only one point on 43% of their ratings. After the SMEs met to discuss the ratings, the ICC increased slightly (ICC = .90). Subsequently, the post-consensus ratings for the two raters were averaged to form a single specificity score for each goal (*M* = 3.02, *SD*= 1.08).

Each of the students' goals was evaluated individually on the two items, and the ratings were used to create a composite goal quality score. In goal theory, effective goals have traditionally been conceptualized as goals that are difficult and specific (Locke & Latham, 1990). Thus, the items representing these two characteristics were expected to load on one higher-order goal quality factor. A Pearson Product Moment Correlation showed that goal difficulty and goal specificity were indeed highly related ($r = .94$, $p < .001$).

The instructions that the participants received contained a template for submitting leader development goals (see Appendix A). The template suggested that each student submit four leader development goals, although the participants were also told that they could alter the format to fit their needs. Thus, some students submitted fewer than four goals (N = 16). In other instances, students submitted more than four goals (N = 4). As the directions suggested that the students submit four goals, only the best four goals were included in the calculation of the goal quality score. When more than four goals were submitted, the goals which had the highest total on the goal difficulty and goal specificity items were used for further analyses. If four or fewer goals were submitted by a student, then all of the student's goals were included in the goal quality composite for the student.

The goal template also suggested categories for the four submitted goals. That is, the students were cued to submit one goal in each of four areas: 1) development of self, 2) development of others, 3) personal development, and 4) a 'wild card' goal. The majority of students submitted goals consistent with this framework and specified which goal was intended to correspond with which suggested topic (67%). However, a portion of the students did not specify which goal was intended to correspond with which of the suggested topics, or submitted goals that did not appear to fit the suggested framework (33%). When making their ratings, the SMEs noted with which goal category the goal corresponded. When the student did not specifically state the goal category, the SMEs evaluated the goal and decided within which category the goal was intended to fit. In instances in which the SMEs disagreed on goal category, the SMEs discussed the discrepancy and reached an agreement.

The purpose of the goal quality measure was to capture differences in quality among the goals submitted by the individuals. However, three other facets may have also effected the differences in the goal quality scores: rater differences, item differences (goal difficulty verses goal specificity), and goal category (developing self, developing others, personal, and wild card). The interactions among the various facets also could have potentially affected the differences in goal quality scores (see Table 2). A generalizability theory approach was employed in order to more thoroughly examine the goal quality variable given these multiple sources of variance.

As noted by Nunnally and Bernstein (1994), "Generalizability theory is one of the most significant extensions of classical measurement theory and should be used more often, especially when data are in the form of ratings" (p. 292). In classical test theory, only the total magnitude of error is recognized, and the reliability coefficient is calculated based only on the total error. Generalizability theory recognizes the difference sources of variance that contribute to the total error, and partitions the proportion of the total error associated with each source of variance. Furthermore, generalizaiblity theory lends to the calculation of a reliability estimate based on the multiple sources of variance (i.e., the generalizability coefficient). Whereas methods previously discussed in this section examined the reliability of the facets separately, the generalizability theory approach allowed for the examination of the reliability of the goal quality measure by examining the variance in all of the facets at the same time. Accordingly, it was appropriate to use a generalizability theory approach to partition the variance due to individual differences from variance due to other factors (e.g., rater differences, item differences, and goal category differences) and to estimate the reliability of the goal quality measure. In order

Table 2

Sources of Variability in the Goal Quality Measure

Source of variability	*Type of variability*
P	Systematic variance associated with the person factor
R	Systematic variance associated with the rater
I	Systematic variance associated with item
C	Systematic variance associated with goal category
P x R	The extent to which a person's ratings by one rater differ in comparison with the other rater
P x I	The extent to which a person's ratings differ on one item in comparison with the other item
P x C	The extent to which a person's ratings differ on one goal category in comparison with other goal categories
R x I	The extent to which one rater's ratings differ on one item in comparison to the other item
R x C	The extent to which one rater's ratings differ on one goal category in comparison to the other goal categories
I x G	The extent to which one item's ratings differ on one goal category in comparison with the other goal categories
e, P x R x I x C	The residual error due to unmeasured aspects of the P, R, I, and G facets

to examine the reliability of the goal quality measure based on generalizability theory, a fully-crossed four random-factor generalizability study was conducted in SPSS using the variance components procedure.

Correspondence between feedback and goals

The correspondence between leader development feedback and leader development goals was used as the second criterion in the study. The purpose of the feedback-goal correspondence criterion was to assess the extent to which each individual incorporated the developmental feedback he or she was given into his or her leader development goals. Although the students received numerous forms of developmental feedback throughout the course of the leadership program, three specific types of feedback were salient at the time when the participants form their developmental goals: multiple rater quantitative feedback, multiple rater open-ended comment feedback, and assessment center feedback. The focus of the measure of the correspondence between feedback and goals is not which specific type of feedback most closely corresponds with the developmental goals. Rather, the interest is whether the goals correspond with the areas of development suggested by the feedback. In a review of the literature, no studies were found that used a similar measure of feedback-goal correspondence. However, as one of the purposes of this research is to examine how dispositional factors predict whether individuals enrolled in a leader development program will utilize the feedback they are given during the program, this criteria is important to this study. Thus, a method to measure the feedback-goal correspondence criterion was created for the purpose of this study.

In order to measure feedback-goal correspondence, it was necessary to first determine each individual's dimensions of developmental feedback. Next, it was also necessary to determine what dimensions each individual mentioned in his or her leader development goals. Finally, it was necessary to measure the correspondence between each individual's feedback and goals. These steps are discussed in the following sections.

Determining dimensions of feedback. Each participant received instructions for interpreting the assessment center and multiple rater quantitative feedback. Areas for potential development were determined for these instruments based on the instructions given to the participants. For example, the individuals received multiple rater quantitative feedback in 17 skill dimensions. The participants were instructed to pay attention to two aspects of the quantitative feedback. First, they were instructed to compare their own ratings on each dimension to the ratings submitted by their supervisor, peers, and subordinates. In particular, they were instructed to pay special attention to any dimension in which their own ratings were more than one point different from the ratings submitted by another source. Even though other studies have used mean differences to determine differences in source ratings (e.g., Atwater & Yamarino, 1992), the instructions given to the participants in this study provide some insight into how they may have interpreted the differences in source ratings. Thus, in this study, differences of one point or greater in self-ratings and other ratings were considered important differences. Second, they were instructed to pay attention to the general level of their ratings, noting any dimensions in which they had received below-average ratings. As a result, in this study, any dimension in which a participant received a rating less than 3 [on a scale of 1 to 5] was considered to be an area of developmental feedback. If an individual received developmental feedback

based on one of these two criterion, it was coded as an area for development in the feedback.

The participants also received feedback based on their participation in a half-day assessment center. The assessment center feedback corresponded with a dimension structure similar to the multiple rater quantitative feedback. That is, participants generally received one of three types of feedback on each of the assessment center dimensions: 1) that his or her performance on the dimension met the expected level of performance, 2) that his or her performance exceeded the expected level of performance, or 3) that his or her performance was below the expected level of performance. Areas in which the individual received feedback that his or her performance was less than the expected level of performance was considered as an area of developmental feedback.

A third type of feedback that was salient at the time when the individuals formed their developmental goals was multiple rater open-ended feedback. Whereas the multiple rater quantitative feedback and the assessment center feedback corresponded with a basic dimension structure, the multiple rater open-ended comments did not fit a specific dimension structure. Instead, the multiple rater sources were asked to make general comments regarding each individual's strengths and areas for developmental improvement. As a result, it was necessary to classify whether each multiple rater open-ended comment feedback was intended as an area of strength or an area of weakness. It was also necessary to classify the multiple rater open-ended comment feedback into a dimension structure similar to that used in the multiple rater quantitative feedback and the assessment center feedback.

Prior to the study, seven SMEs each reviewed 3 to 5 past students' 360-degree open-ended comment feedback. The SMEs were able to reliably classify the open-ended comment feedback into feedback categories. Based on recommendations from the SMEs, several additional feedback dimensions were included in the classification schema for the multiple rater open-ended comment feedback beyond the dimensions included in the multiple rater quantitative feedback and the assessment center feedback. Specifically, the SMEs noted that several individuals received feedback regarding their openness to feedback from others and their work-life balance.

For the actual study, two SMEs coded all of the participants' multiple rater open-ended comment feedback. The open-ended comments were listed in a text analysis program, QDA Miner (Provalis Research, 2006). The SMEs independently read each open-ended comment submitted by the students' supervisors, peers, and subordinates, and classified the open-ended comments into one of the feedback dimensions. Specifically, each piece of feedback was either assigned one of the 17 dimensions included in the leader development 360-degree quantitative instrument or assessment center feedback, or was assigned one of the additional dimensions specific for the 360-degree open-ended comments as suggested by the SMEs. The SMEs also coded whether each comment was intended to highlight a strength or weakness in the student's performance. After making their independent ratings, the two SMEs met to discuss any classification on which they disagreed. Only those areas in which the two SMEs agreed were included in the final feedback-goal correspondence analysis. Prior to consensus, agreement between the two SME's regarding the instances of developmental feedback was 87% (Krippendorf's Alpha = .63, Free marginal 50% chance = .74).

Altogether, the three sources of feedback (e.g., multiple rater quantitative feedback, multiple rater open-ended feedback, and assessment center feedback) were considered together in order to determine areas in which each individual received developmental feedback. If the individual received developmental feedback in a dimension, then that was considered as a source of developmental feedback to be used to calculate feedback-goal correspondence.

Determining developmental goal dimensions. In order to calculate feedback-goal correspondence, it was also necessary to classify the topics included in the student's leader development goals. The leader development goals were listed in QDA Miner (Provalis Research, 2006), and the goals were coded into the same dimensions used to classify the 360-degree open-ended comment feedback. Prior to the actual study, four SMEs familiar with the leader development program examined several past students' leader development goals. The SMEs assigned the same dimensions to the goals 72% of the time. Based on the suggestion of the SMEs, several additional goal classifications were added to the classification scheme, including "complete an MBA" and "job specific analysis".

For the actual study, two of the SMEs classified the leader development goals into assessment dimensions. The two SMEs independently used QDA Miner to classify the topics included in the leader development plans and agreed regarding goal classification 91% of the time (Krippendorf's Alpha = .67; Free marginal 50% chance = .81). In instances when the two SMEs disagreed regarding a goal classification, the two SMEs met to discuss the discrepancy. Only those goals on which the SMEs agreed were included in the final feedback-goal correspondence analysis.

Calculating feedback-goal correspondence. In summary, the three sources of feedback were examined to determine areas in which the individuals received developmental feedback. In this study, the severity of the feedback was not of interest. Rather, the presence of developmental feedback was of interest. Thus, a binary classification was used to indicate whether the individual received developmental feedback in each of the performance dimensions. Next, the leader development goals were examined to determine the areas in which the individuals intended to focus their efforts during the leader development program. Subsequently, the number of goal dimensions that corresponded with a developmental feedback dimension was tabulated. Finally, feedback-goal correspondence was calculated as the proportion of the submitted goals that corresponded with areas of feedback over the total number of goals submitted. As an alternative measure for analytical purposes, the sum of the number of goals that corresponded with areas of developmental feedback was also recorded.

Analyses

Preliminary Data Analyses

Three methods were employed to contend with missing data in this study: listwise deletion, pairwise deletion, and expectation maximization imputation. The employment of each technique was dependent on the variable type and the characteristics of the missing data.

One of the individuals dropped out of the program before participation in the initial assessment process. As criterion data was not available for this individual, listwise deletion was employed (Switzer & Roth, 2002). The individual was not included in subsequent analyses.

Several participants in the leader development program did not submit leader development goals. In order to determine the reasons for the lack of goals, the author contacted the leader development coach for each of the individuals. There were various reasons cited for the failure to submit goals. Some of the reasons were valid, others were not. For example, a number of participants entirely dropped out of the executive MBA program prior to submitting goals (n = 6), and one of the executive coaches did not maintain records of leader development goals (n = 4). One individual had been paired with a leader development coach internal to her organization and decided to not meet with the leader development facilitator provided by the MBA program (n = 1). For these 11 individuals, data for the goal quality and feedback-goal correspondence measure were treated as missing, and pairwise deletion was applied (Table 3). That is, the case was deleted for any analyses in which the goal outcome measures were included, but the case was included in all of the analyses that included only the dispositional variables (Switzer & Roth, 2002).

In other instances, the coaches perceived that the individuals had avoided participation in the leader development opportunity (n = 7). That is, despite continued enrollment in the MBA program and multiple communications with the leader development program facilitators and staff, some participants failed to submit goals for development. For these individuals, the lowest possible score was submitted for each of the goal criterion due to failure to submit quality goals and failure to address areas of developmental feedback.

Alternative techniques were used to address missing data in the predictor variables and control variables. To address missing data for the predictor and control

variables, two techniques were employed: pairwise deletion and expectation maximization imputation. The application of each of these techniques was contingent on the level of the missing data. Some of the participants failed to submit measures requested by the leader development program (see Table 3). Pairwise deletion was applied in cases for which data was missing for an entire construct or measure.

In other cases, the majority of the data was available to estimate a construct, but one or two item-level data points were missing (see Table 4). Expectation maximization (EM) imputation was applied in cases for which items were missing from construct measures, but the majority of the items were available (Switzer & Roth, 2002). The EM technique was chosen because it tends to impute relatively accurate data without the loss in power associated with pairwise and listwise deletion, and without the introduction of error associated with some other imputation techniques (Switzer & Roth, 2002). EM estimates missing data by using the iterative maximum likelihood approach. Whereas the missing data points are the focus of other missing imputation techniques, the parameter estimates are the focus of the EM method. That is, in EM, pairwise deletion is used to estimate the study parameters based on the available data, and then the expected values are calculated for the missing data given the parameter estimates. Based on the imputed missing data, the parameters are estimated again, and then new expected values are calculated for the missing data given the new parameter estimates. This process is repeated until the parameter estimates begin to converge. In the current study, EM was conducted using SPSS 15.0.

Table 3

Summary of Missing Construct Level Personality and Control Data

Measure	Percent Cases Missing	Number Cases Missing	Remaining *N* for analyses
CSE	11.8%	14	105
LGO	11.8%	14	105
PPGO	11.8%	14	105
PAGO	11.8%	14	105
Narcissism	19.3%	23	96
Responsibility	19.3%	23	96
CTA	5.04%	6	113
Past Feedback Experience	19.3%	23	96
Number of Workshops Attended	18.5%	22	97
Number of Hours Spent in T&D	23.5%	28	91
Goal Quality	10.1%	12	107
Feedback-Goal Correspondence	10.1%	12	107

Note. CSE = Core Self-Evaluation, LGO = Learning Goal Orientation, PPGO = Performance-Prove Goal Orientation, PAGO = Performance-Avoid Goal Orientation, CTA = Watson-Glaser Critical Thinking Appraisal – Form A.

Table 4

Missing item-level personality and control data

Measure	Number of items missing	Percent of items missing
Self-esteem	13	1.7%
Self-efficacy	14	2.25%
Locus of Control	6	1.45%
Neuroticism	16	1.66%
LGO	6	1.45%
PPGO	7	2.2%
PAGO	9	2.45%
Narcissism	59	1.6%
Responsibility	42	1.16%

Note. LGO = Learning Goal Orientation, PPGO = Performance-Prove Goal Orientation, PAGO = Performance-Avoid Goal Orientation.

Generalizability Study

Prior to examining the results of the study, the generalizability of the goal quality measure was examined. The generalizability study was conducted in SPSS using the variance components procedure. Specifically, the minimum norm quadratic unbiased estimator (MINQUE) method was employed, and all main, two-way, and three-way effects were examined. Furthermore, the variance components were used to create generalizabilty and dependability coefficients for the goal quality measure. In order to avoid additional unreliability associated with different types of goals submitted by individuals, data were included only for those individuals who 1) submitted 4 goals, and 2) submitted 4 goals that matched each of the topics suggested in the instructions. Thus, ratings for 68 individuals were included in the generalizability analyses.

The results of the generalizability study are presented in Table 5. Differences among study participants attributed 53% of the explainable variance. Nevertheless, a substantial portion of the variance was also attributed to study artifacts. That is, 14% of the explainable variance was attributed to the interaction between person and category, 4% of the explainable variance was attributed to the interaction between person and rater, and 7% of the explainable variance was due to the interaction between person and items. The variance components were used to calculate generalizability and dependability coefficients (see Table 6). Similar to reliability coefficients, generalizability coefficients range from 0 to 1.0. According to Nunnally and Bernstein (1994), reliability values of .70 or greater represent a modest level of reliability and are acceptable, and expecting values much beyond .80 is unnecessary given money and time constraints associated with basic research. The generalizability coefficient was .82, representing an acceptable level of

Table 5

Variance Component Estimates based on Post-Consensus Ratings

Source of Variation		Variance Components	Percent of Explained Variance	Percent of Total Variance
Person	P	.49	53	46
Rater	R	.01	1	1
Item	i	.00	0	0
Category	c	.01	1	1
Person x Rater	p * r	.04	4	4
Person x Item	P * i	.06	7	6
Person x Category	p * c	.13	14	12
Rater x Item	r * i	.00	0	0
Rater x Category	r * c	.00	0	0
Item x Category	i * c	.00	0	0
Person x Rater x Item	p * r * i	.03	3	3
Person x Rater x Category	p * r * c	.05	5	5
Person x Item x Category	p * i * c	.10	11	9
Rater x Item x Category	r * i * c	.01	1	1
Error	e, p * r * i * c	.14	--	13

Table 6

Generalizability Coefficient Estimates for Post-Consensus Ratings

Source of Variance	Component Estimate
$\Sigma^2_{Rel} = \sigma^2_{pi}/n_i + \sigma^2_{pr}/n_r + \sigma^2_{pc}/n_c + \sigma^2_{pir}/n_i\, n_r + \sigma^2_{pic}/n_i\, n_c + \sigma^2_{prc}/n_r n_c + \sigma^2_{e}/n_i\, n_r\, n_c$	.11
$\Sigma^2_{Abs} = \sigma^2_{i}/n_i + \sigma^2_{r}/n_r + \sigma^2_{c}/n_c + \sigma^2_{pi}/n_i + \sigma^2_{pr}/n_c + \sigma^2_{pc}/n_c + \sigma^2_{ir}/n_i\, n_r + \sigma^2_{ic}/n_i\, n_c + \sigma^2_{rc}/n_r n_c + \sigma^2_{pir}/n_i\, n_r + \sigma^2_{pic}/n_i\, n_c + \sigma^2_{prc}/n_r n_c + \sigma^2_{irc}/n_i\, n_r\, n_c + \sigma^2_{e}/n_i\, n_r\, n_c$	.12
$E\rho^2_{Rel} = \sigma^2_p / \sigma^2_p + \sigma^2_{Rel}$	.82
$\Phi = \sigma^2_p / \sigma^2_p + \sigma^2_{Abs}$	.80

reliability. The goal quality score based on the average of the goal quality ratings made by each of the two raters on each of the two goal quality items and categories was used in the tests of the hypotheses.

Hypothesis Tests

The hypotheses were analyzed in several stages. First, means, standard deviations, and correlations were examined on all of the study variables. Results of post hoc power analyses are reported for each analysis, as calculated in G*Power (Faul, 2006), and represent the power to detect a medium effect size for the specific type of test based on the standards outlined by Cohen (1988). Second, the correlation coefficients were used as an initial test of Hypotheses 1 through 14, and hierarchical linear regressions were conducted in order to examine the hypothesized relationships after controlling for variables extraneous to the hypotheses (critical thinking ability, responsibility, past feedback experience, number of workshops attended, and number of hours spent in training and development). As the direction of the expected relationships was stated in the hypotheses, a one-tailed significance test was used when examining these hypotheses. When examining hypotheses that included goal quality or feedback-goal correspondence, all of the control variables were included in the hierarchical linear regression. When examining hypotheses that did not include the two goal criteria (e.g., Hypothesis 9 through Hypothesis 14), only the individual difference control variables were included. That is, as critical thinking ability and responsibility are individual difference variables, it is reasonable to assume that they may explain variance in the goal orientation dimensions. However, past feedback experience, number of workshops attended, and number of hours spent in training and development are likely outcomes of the goal

orientation variables, but should not be examined as factors that may influence the goal orientation dimensions.

Third, regression was used in order to examine Hypothesis 15 and Hypothesis 16, following the Baron and Kenny approach (1986), as revised by James, Muliac, and Brett (2006). In order to demonstrate mediation, it is necessary to demonstrate that the mediator variables are a function of the antecedent variables, the outcome variables are a function of the mediator variables, and that the antecedent variables does not explain additional variance in the outcome variable once the mediating variables are controlled.

CHAPTER III

Results

There were two types of participants in the leader development program: those who submitted goals for leader development, and those who did not. Means, standard deviations, and sample size on the study variables for the total sample (including both those who did and those who did not submit goals) are reported in Table 7, along with means, standard deviations, and sample sizes for a subsample of those who did submit leader development goals and a subsample of those who did not submit leader development goals. Mean differences between the two subsamples were examined based on independent sample *t* tests, and the results of the analyses are also reported in Table 7.

For some of the variables, the means for the two groups were significantly different. The mean core self-evaluation (CSE) score for individuals who submitted goals ($M = 4.05$, $SD = .43$) was significantly lower than the mean CSE score for individuals who did not submit goals ($M = 4.41$, $SD = .38$), $t\ (103) = 2.11$, $p < .05$. Interestingly, this mean difference is opposite the direction expected based on the hypotheses. Furthermore, the mean score for one of the control variables, numbers of hours spent in Training and Development, was significantly higher for those individuals who submitted goals ($M = 60.70$, $SD = 58.60$) than those who did not ($M = 35.00$, $SD = 10.00$), $t\ (18.35) = -3.20$, $p < .05$.

The hypotheses were examined based on the total sample including individuals who did not submit goals and based on the subsample including only those individuals who submitted goals. The overall results of the study were the same in each set of

Table 7

Summary Statistics for the Total Sample and Two Subsamples

	Total Sample			Did not submit goals			Did Submit Goals				
Variables	*M*	*SD*	*N*	*M*	*SD*	*N*	*M*	*SD*	*N*	*t*	*df*
CSE Manifest Indicators											
Self-Esteem	4.33	.49	105	4.61	.34	7	4.31	.49	98	1.61	103
Self-Efficacy	4.44	.46	105	4.61	.33	7	4.43	.46	98	1.00	103
Locus of Control	3.91	.42	105	4.16	.37	7	3.89	.42	98	1.67	103
Neuroticism	2.29	.73	105	1.76	.71	7	2.32	.72	98	-2.00*	103
Predictor Variables											
CSE	4.08	.44	105	4.41	.38	7	4.05	0.43	98	2.11*	103
LGO	4.38	.50	105	4.71	.20	7	4.36	0.50	98	1.85	103
PPGO	3.26	.70	105	3.14	.61	7	3.27	0.70	98	-.46	103
PAGO	2.35	.86	105	2.04	.61	7	2.38	0.86	98	-1.01	103
Narcissism	24.74	6.63	96	25.80	5.85	5	24.69	6.70	91	.36	94
Control Variables											
CTA	63.20	7.78	113	60.00	4.73	6	63.38	7.90	107	-1.04	111
Responsibility	26.09	4.21	96	25.73	3.94	5	26.11	4.25	91	-.20	94
Past Feedback	1.56	1.16	96	.50	1.00	4	1.61	1.15	93	-1.90	94
Workshops	2.54	2.54	97	4.25	3.86	4	2.46	2.47	93	1.38	95
Hours of T&D †	59.57	57.55	91	35.00	10.00	4	60.70	58.60	87	-3.20*	18.35
Outcome Variables											
Goal Quality	2.84	1.05	107	0.00	0.00	7	3.04	.76	100	---	---
FGC	.46	.25	107	0.00	0.00	7	.49	.23	100	---	---

Note. Mean comparisons were not conducted between the two groups on the goal quality and feedback-goal correspondence measures, denoted by dashes for Student's *t* and *df* for those variables. CSE = Core Self-Evaluation; LGO = Learning Goal Orientation; PPGO = Performance-Prove Goal Orientation; PAGO = Performance-Avoid Goal Orientation; FGC = Feedback-Goal Correspondence. Observed statistical power ranged from .25 to .35 to find a significant difference ($p < .05$) between the two independent means based a medium effect (.50) for a Student's *t*. * $p < .05$. †Levene's test for equality of variances suggested a significant difference in variance between the two groups for the variable Hours of Training and Development. In this instance, an independent samples *t*-test with equal variances not assumed is reported.

analyses. Because the goal of the study was to examine whether the dispositional variables were related to leader development goal quality and feedback-goal correspondence, only goal quality and feedback-goal correspondence scores for individuals who submitted goals are included in the tests of the hypotheses reported in this paper. The correlation matrix is presented in Table 8, with coefficient alphas for the study variables displayed on the diagonal.

Initial Tests of the Hypotheses

Prior to examining the hypotheses, correlations were examined in order to determine the appropriateness of studying the two goal criterion separately. Goal quality and feedback-goal correspondence were related ($r = .26$, $p < .05$), but not redundant variables. Furthermore, the two measures typically correlated differently with the other study variables. Thus, the goal quality and feedback-goal correspondence measures were examined separately in subsequent analyses.

Hypothesis Tests of Direct Relationships

Hypotheses 1 through 14 were initially tested by examining the correlation coefficient. Hierarchical regression was employed to determine if each predictor variable was related to each outcome variable when the effect of the relevant control variables was removed. Specifically, for Hypotheses 1 through 14, SPSS Regression METHOD ENTER was used with the predictor and control variables both being regressed on the outcome variables. The control variables were entered in Step 1, and the hypothesized predictor variable was entered in Step 2. The results of these regression analyses are presented in Table 9 through Table 15. As there was missing data in several of the control variables, and as listwise deletion was used to deal with missing data in each analysis, the

Table 8

Zero-Order Correlations for Study Variables

	Variable	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.
1.	Self-Esteem	(.82)														
2.	Self-Efficacy	.80*	(.78)													
3.	Locus of Control	.34*	.38*	(.58)												
4.	Neuroticism	-.56*	-.54*	-.18*	(.92)											
5.	CSE	.85*	.83*	.46*	-.87*	(.91)										
6.	LGO	.19*	.24*	.36*	-.11	.24*	(.80)									
7.	PPGO	-.30*	-.24*	.17*	.43*	-.34*	.24*	(.66)								
8.	PAGO	-.38*	-.40*	-.07	.56*	-.52*	-.06	.46*	(.86)							
9.	Narcissism	-.05	.01	.14	.22	-.10	.27*	.42*	.29*	(.80)						
10.	Critical Thinking	-.14	-.01	-.21*	.03	-.10	.19	-.07	.04	-.16	--					
11.	Responsibility	.23*	.20*	.03	-.25*	.25*	.05	-.20*	-.30*	-.51*	.07	(.71)				
12.	Past Feedback	.25*	.13	.16	-.25*	.27*	.10	.01	-.23*	.06	-.14	.03	--			
13.	Workshops	.14	.06	.13	-.16	.18*	.28*	.02	-.00	.11	-.09	.04	.10	--		
14.	Hours of T & D	.21*	.12	.05	-.26*	.25*	.07	-.06	-.16	-.15	.07	.21*	.15	.38*	--	
15.	Goal Quality	.07	.17	-.09	-.16	.14	-.03	-.05	-.15	.02	.11	.11	.06	-.04	.30*	--
16.	FGC	-.05	.03	-.02	-.08	.03	-.09	-.17*	-.23*	-.17	.22*	.08	-.01	-.14	-.02	.26*

Note. Reliabilities based on Cronbach's Alpha are presented on the diagonal. A dash is used for those variables in which Cronbach's Alpha could not be computed, was irrelevant, or was not used to measure reliability. CSE = Core Self-Evaluation; LGO = Learning Goal Orientation; PPGO = Performance-Prove Goal Orientation; PAGO = Performance-Avoid Goal Orientation. N = 87- 105 for correlations involving hypothesized relationships. Power to observe a significant effect ($p < .05$) ranged from .90 to .94 given a medium effect size ($\eta = .30$). $^{*}p < .05$, one-tailed.

sample size for the analyses examining the control variables is much smaller than the sample size for the correlation analyses. Nevertheless, in each analysis there was ample power to detect a significant relationship.

Hypothesis 1, which stated that CSE would be significantly related to goal quality, was not supported. That is, the zero-order correlation between CSE and goal quality was not significant (r = .14, p = ns), and CSE did not add a significant amount of variance to the goal quality score beyond the variance attributed to the control variables based on a hierarchical regression [β = .07, p = ns] (see Table 9). Hypothesis 2 stated that narcissism would be negatively related to feedback-goal correspondence. The correlation between narcissism and feedback-goal correspondence also fell short of statistical significance (r = -.17, p = ns), and the variance in feedback-goal correspondence accounted for by narcissism was negligible once the variance due to the extraneous variables was controlled [β = -.08, p = ns] (see Table 10). In all, neither Hypothesis 1 nor Hypothesis 2 was supported.

Hypothesis 3 stated that learning goal orientation (LGO) would be positively related to goal quality, and Hypothesis 4 stated that LGO would be positively related to feedback-goal correspondence. Based on the zero-order correlations, LGO was not significantly related to goal quality (r = -.03, p = ns) or feedback-goal correspondence (r = -.09, p = ns). Furthermore, once control variables were included in hierarchical regressions (see Table 11), LGO contributed an insignificant amount of variance to goal quality [β = .00, p = ns] and feedback-goal correspondence [β = -.05, p = ns]. Support was found for neither Hypothesis 3 nor Hypothesis 4.

Table 9
CSE and Control Variables Predicting Goal Quality (N = 65)

	DV: Goal Quality					
Variables	B	*SE B*	*β*	*r*	*Partial r*	*Part r*
Step 1						
Critical Thinking	.01	.01	.10	.14	.10	.09
Responsibility	.01	.02	.04	.13	.04	.04
Past Feedback	.03	.09	.05	.08	.05	.05
Workshops	-.04	.05	-.12	.04	-.11	-.10
Hours in T&D	.01	.00	.38*	.35	.34	.33
Step 2						
Critical Thinking	.01	.01	.09	.14	.10	.09
Responsibility	.01	.02	.03	.13	.03	.03
Past Feedback	.02	.09	.03	.08	.03	.03
Workshops	-.04	.05	-.12	.04	-.12	-.11
Hours in T&D	.01	.00	.37*	.35	.33	.32
CSE	.13	.27	.07	.17	.07	.06

Note. R^2 = .15 for Step 1; ΔR^2 = .00 for Step 2 (p = ns). CSE = Core Self-Evaluation. Observed statistical power (α = .05) = .87 to find a significant change in R^2 based on a medium effect size (η = .15). * $p < .05$.

Table 10

Narcissism and Control Variables Predicting Feedback-Goal Correspondence (N = 68)

	DV: Feedback-Goal Correspondence					
Variables	B	*SE B*	*β*	*r*	*Partial r*	*Part r*
Step 1						
Critical Thinking	.01	.00	.16	.16	.16	.16
Responsibility	.01	.01	.11	.11	.11	.11
Past Feedback	.01	.02	.04	.02	.04	.04
Workshops	.00	.01	-.02	-.05	-.02	-.02
Hours in T&D	.00	.00	-.06	-.02	-.05	-.05
Step 2						
Critical Thinking	.00	.00	.15	.16	.15	.15
Responsibility	.00	.01	.07	.11	.06	.05
Past Feedback	.01	.02	.05	.02	.05	.05
Workshops	.00	.01	.00	-.05	.00	.00
Hours in T&D	.00	.00	-.06	-.02	-.06	-.06
Narcissism	.00	.01	-.08	-.14	-.07	-.07

Note. R^2 = .04 for Step 1; ΔR^2 = .00 for Step 2 (p = ns). Observed statistical power (α = .05) = .88 to find a significant change in R^2 based on a medium effect size (η = .15). $^*p < .05$.

Table 11
LGO and Control Variables Predicting Goal Quality and Feedback-Goal Correspondence

Table 11*a*
LGO and Control Variables Predicting Goal Quality (N = 65)

	DV: Goal Quality					
Variables	B	*SE B*	*β*	*r*	*Partial r*	*Part r*
Step 1						
Critical Thinking	.01	.01	.10	.14	.10	.09
Responsibility	.01	.02	.04	.13	.04	.04
Past Feedback	.03	.09	.05	.08	.05	.05
Workshops	-.04	.05	-.12	.04	-.11	-.10
Hours in T&D	.01	.00	.38*	.35	.34	.33
Step 2						
Critical Thinking	.01	.01	.10	.14	.10	.09
Responsibility	.01	.02	.04	.13	.04	.04
Past Feedback	.03	.09	.05	.08	.05	.04
Workshops	-.04	.05	-.12	.04	-.11	-.10
Hours in T&D	.01	.00	.38*	.35	.34	.33
LGO	.00	.21	.00	.07	.00	.00

Note. R^2 = .15 for Step 1; ΔR^2 = .00 for Step 2 (p = ns). LGO = Learning Goal Orientation. Observed statistical power (α = .05) = .87 to find a significant change in R^2 based on a medium effect size (η = .15).
* $p < .05$.

Table 11*b*
LGO and Control Variables Predicting Feedback-Goal Correspondence (N = 65)

	DV: Feedback-Goal Correspondence					
Variables	B	*SE B*	*β*	*r*	*Partial r*	*Part r*
Step 1						
Critical Thinking	.01	.00	.16	.16	.16	.16
Responsibility	.01	.01	.11	.11	.11	.10
Past Feedback	.01	.02	.04	.02	.04	.04
Workshops	.00	.01	-.02	-.06	-.02	-.02
Hours in T&D	.00	.00	-.09	-.05	-.08	-.08
Step 2						
Critical Thinking	.01	.00	.17	.16	.17	.17
Responsibility	.01	.01	.11	.11	.10	.10
Past Feedback	.01	.03	.05	.02	.05	.05
Workshops	.00	.01	-.01	-.06	-.01	-.01
Hours in T&D	.00	.00	-.08	-.05	-.08	-.07
LGO	-.02	.06	-.05	-.02	-.05	-.05

Note. R^2 = .04 for Step 1; ΔR^2 = .00 for Step 2 (p = ns). LGO = Learning Goal Orientation. Observed statistical power (α = .05) = .87 to find a significant change in R^2 based on a medium effect size (η = .15).
* $p < .05$.

Hypothesis 5 and Hypothesis 6 pertained to the relationships between performance-prove goal orientation (PPGO) and the goal criterion variables. Hypothesis 5, which stated that PPGO would be positively related to goal quality, was not supported based on the zero-order correlation (r = -.05, p = ns), or the hierarchical regression controlling for extraneous variables (β = -.03, p = ns) (see Table 12a). Hypothesis 6, which stated that PPGO would be negatively related to feedback-goal correspondence, was supported based on the zero-order correlation (r = -.17, p < .05). However, when control variables were included in a hierarchical regression (see Table 12b), the amount of variance in feedback-goal correspondence attributed to PPGO was negligible [β = -.05, p = ns]. Full support was found for neither Hypothesis 5 nor Hypothesis 6.

Hypothesis 7 stated that performance-avoid goal orientation (PAGO) would be negatively related to goal quality, and Hypothesis 8 stated that PAGO would be negatively related to feedback-goal correspondence. Hypothesis 7 was not supported based on the zero-order correlation (r = -.15, p = ns) or a hierarchical regression accounting for variance contributed by control variables (β = -.07, p = ns) (see Table 13a). Hypothesis 8 was supported based on the zero-order correlation (r = -.23, p < .05). Nonetheless, PAGO only explained 2% additional variance in feedback-goal correspondence beyond that explained by the control variables (β = -.15, p = ns) (see Table 13b). As the correlation between PAGO and goal quality was not significant, and as including control variables diminished the variance in feedback-goal correspondence explained by PAGO, support was not found for Hypothesis 7 or Hypothesis 8.

Hypotheses 9, 10, and 11 stated the expected relationship between CSE and the goal orientation variables, and Hypothesis 12, 13, and 14 stated the expected

Table 12
PPGO and Control Variables Predicting Goal Quality and Feedback-Goal Correspondence

Table 12*a*
PPGO and Control Variables Predicting Goal Quality (N = 65)

	DV: Goal Quality					
Variables	B	*SE B*	*β*	*r*	*Partial r*	*Part r*
Step 1						
Critical Thinking	.01	.01	.10	.14	.10	.09
Responsibility	.01	.02	.04	.13	.04	.04
Past Feedback	.03	.09	.05	.08	.05	.05
Workshops	-.04	.05	-.12	.04	-.11	-.10
Hours in T&D	.01	.00	.38*	.35	.34	.33
Step 2						
Critical Thinking	.01	.01	.10	.14	.10	.09
Responsibility	.01	.02	.03	.13	.04	.03
Past Feedback	.03	.09	.05	.08	.05	.05
Workshops	-.04	.05	-.12	.04	-.11	-.11
Hours in T&D	.01	.00	.38*	.35	.34	.33
PPGO	-.03	.14	-.03	-.02	-.03	-.03

Note. R^2 = .15 for Step 1; ΔR^2 = .00 for Step 2 (p = ns). PPGO = Performance Prove Goal Orientation. Observed statistical power (α = .05) = .87 to find a significant change in R^2 based on a medium effect size (η = .15). $^*p < .05$.

Table 12*b*
PPGO and Control Variables Predicting Feedback-Goal Correspondence (N = 65)

	DV: Feedback-Goal Correspondence					
Variables	B	*SE B*	*β*	*R*	*Partial r*	*Part r*
Step 1						
Critical Thinking	.01	.00	.16	.16	.16	.16
Responsibility	.01	.01	.11	.11	.11	.10
Past Feedback	.01	.02	.04	.02	.04	.04
Workshops	.00	.01	-.02	-.06	-.02	-.02
Hours in T&D	.00	.00	-.09	-.05	-.08	-.08
Step 2						
Critical Thinking	.00	.00	.16	.16	.16	.16
Responsibility	.01	.01	.10	.11	.10	.10
Past Feedback	.01	.02	.04	.02	.04	.04
Workshops	.00	.01	-.02	-.06	-.02	-.02
Hours in T&D	.00	.00	-.08	-.05	-.07	-.07
PPGO	-.02	.04	-.05	-.07	-.05	-.05

Note. R^2 = .04 for Step 1; ΔR^2 = .00 for Step 2 (p = ns). PPGO = Performance Prove Goal Orientation. Observed statistical power (α = .05) = .87 to find a significant change in R^2 based on a medium effect size (η = .15). $^*p < .05$.

Table 13
PAGO and Control Variables Predicting Goal Quality and Feedback-Goal Correspondence

Table 13a
PAGO and Control Variables Predicting Goal Quality (N = 65)

	DV: Goal Quality					
Variables	B	*SE B*	*β*	*r*	*Partial r*	*Part r*
Step 1						
Critical Thinking	.01	.01	.10	.14	.10	.09
Responsibility	.01	.02	.04	.13	.04	.04
Past Fdbk. Experience	.03	.09	.05	.08	.05	.05
No of Workshops	-.04	.05	-.12	.04	-.11	-.10
No of Hours in T&D	.01	.00	.38*	.35	.34	.33
Step 2						
Critical Thinking	.01	.01	.10	.14	.11	.10
Responsibility	.00	.02	.02	.13	.02	.02
Past Fdbk. Experience	.02	.09	.03	.08	.03	.03
No of Workshops	-.04	.05	-.11	.04	-.11	-.10
No of Hours in T&D	.01	.00	.38*	.35	.34	.33
PAGO	-.07	.13	-.07	-.11	-.07	-.07

Note. R^2 = .15 for Step 1; ΔR^2 = .00 for Step 2 (p = ns). PAGO = Performance Avoid Goal Orientation. Observed statistical power (α = .05) = .87 to find a significant change in R^2 based on a medium effect size (η = .15). $^*p < .05$.

Table 13b
PAGO and Control Variables Predicting Feedback-Goal Correspondence (N = 65)

	DV: Feedback-Goal Correspondence					
Variables	B	*SE B*	*β*	*r*	*Partial r*	*Part r*
Step 1						
Critical Thinking	.01	.00	.16	.16	.16	.16
Responsibility	.01	.01	.11	.11	.11	.10
Past Feedback	.01	.02	.04	.02	.04	.04
Workshops	.00	.01	-.02	-.06	-.02	-.02
Hours in T&D	.00	.00	-.09	-.05	-.08	-.08
Step 2						
Critical Thinking	.01	.00	.17	.16	.17	.17
Responsibility	.00	.01	.07	.11	.07	.07
Past Feedback	.00	.03	.00	.02	.00	.00
Workshops	.00	.01	-.01	-.06	-.01	-.01
Hours in T&D	.00	.00	-.09	-.05	-.08	-.08
PAGO	-.04	.03	-.15	-.15	-.14	-.14

Note. R^2 = .04 for Step 1; ΔR^2 = .02 for Step 2 (p = ns). PAGO = Performance Avoid Goal Orientation. Observed statistical power (α = .05) = .87 to find a significant change in R^2 based on a medium effect size (η = .15). $^*p < .05$.

relationships between narcissism and the goal orientation variables. Because feedback and development variables would not be expected to influence the relationships among dispositional variables, past feedback experience, number of workshops attended, and number of hours spent in training and development were not included as control variables in the tests of Hypothesis 9 through Hypothesis 14. Critical thinking ability and responsibility were included in the tests of these hypotheses.

Hypothesis 9, which stated that CSE would be positively related to LGO, was supported based on the zero-order correlations ($r = .24$, $p < .05$). Moreover, CSE explained a substantial amount of variance (9%) in LGO when the two individual difference variables were controlled ($\beta = .31$, $p < .05$] (see Table 14a). Hypothesis 10, which stated that CSE would be positively related to PPGO, was not supported. The correlation between CSE and PPGO was significant, but in the direction opposite of the stated hypothesis ($r = -.34$, $p < .05$). Furthermore, CSE explained a significant portion of the variance in PPGO (8%), even after the control variables were accounted for ($\beta = -.30$, $p < .05$) (see Table 14b). Because the significant relationship was in the direction opposite that stated in the Hypothesis, Hypothesis 10 was not supported. Hypothesis 11, which stated that CSE would be negatively related to PAGO, was supported based on both the correlation ($r = -.52$, $p < .05$), and the hierarchical regression controlling for the individual difference variables [$\beta = -.50$, $p < .05$] (see Table 14c). Specifically, CSE explained 23% of the variance in PAGO after critical thinking ability and responsibility were controlled. In sum, the data supported a positive relationship between CSE and LGO (Hypothesis 9), and a negative relationship between CSE and PAGO (Hypothesis

Table 14
CSE and Control Variables Predicting the Goal Orientation Dimensions

Table 14*a*
CSE and Control Variables Predicting LGO (N = 89)

	DV: LGO					
Variables	B	*SE B*	*β*	*r*	*Partial r*	*Part r*
Step 1						
Critical Thinking	.01	.01	.22*	.22	.22	.22
Responsibility	.00	.01	.02	.04	.02	.02
Step 2						
Critical Thinking	.02	.01	.27*	.22	.27	.26
Responsibility	-.01	.01	-.07	.04	-.07	-.06
CSE	.33	.12	.31*	.26	.30	.29

Note. R^2 = .05 for Step 1; ΔR^2 = .09 for Step 2 ($p < .05$). LGO = Learning Goal Orientation; CSE = Core Self-Evaluation. Observed statistical power (α = .05) = .95 to find a significant change in R^2 based on a medium effect size (η = .15). $^*p < .05$.

Table 14b
CSE and Control Variables Predicting PPGO (N = 89)

	DV: PPGO					
Variables	B	*SE B*	*β*	*r*	*Partial r*	*Part r*
Step 1						
Critical Thinking	.00	.01	-.04	-.06	-.04	-.04
Responsibility	-.03	.02	-.18	-.19	-.18	-.18
Step 2						
Critical Thinking	-.01	.01	-.08	-.06	-.09	-.08
Responsibility	-.02	.02	-.11	-.19	-.11	-.10
CSE	-.46	.16	-.30*	-.31	-.29	-.28

Note. R^2 = .04 for Step 1; ΔR^2 = .08 for Step 2 (p = < .05). PPGO = Performance Prove Goal Orientation; CSE = Core Self-Evaluation. Observed statistical power (α = .05) = .95 to find a significant change in R^2 based on a medium effect size (η = .15). $^*p < .05$.

Table 14c

CSE and Control Variables Predicting PAGO (N = 89)

	DV: PAGO					
Variables	B	*SE B*	*β*	*r*	*Partial r*	*Part r*
Step 1						
Critical Thinking	.01	.01	.10	.07	.11	.10
Responsibility	-.07	.02	-.31*	-.30	-.31	-.31
Step 2						
Critical Thinking	.00	.01	.03	.07	.03	.03
Responsibility	-.04	.02	-.18*	-.30	-.21	-.18
CSE	-.94	.17	-.50*	-.55	-.51	-.48

Note. R^2 = .10 for Step 1; ΔR^2 = .23 for Step 2 ($p < .05$). PAGO = Performance Avoid Goal Orientation; CSE = Core Self-Evaluation. Observed statistical power ($\alpha = .05$) = .95 to find a significant change in R^2 based on a medium effect size ($\eta = .15$). $^*p < .05$.

11). However, the data indicated that the relationship between CSE and PPGO is actually negative rather than positive, contradicting the tenet of Hypothesis 10.

Hypothesis 12 stated a negative relationship between narcissism and LGO. Although the correlation was significant ($r = .27$, $p < .05$), and although narcissism explained a substantial portion of the variance (5%) in LGO beyond that explained by the control variables ($\beta = .43$, $p < .05$), the relationship was opposite that stated in the Hypotheses (see Table 15a). Thus, Hypothesis 12 was not supported. Hypothesis 13, which stated that narcissism would be positively related to PPGO, was supported based on the correlation ($r = .42$, $p < .05$) and the amount of variance in PPGO explained by narcissism (16%) above that explained by the control variables [$\beta = .47$, $p < .05$] (see Table 15b). Hypothesis 14 stated a positive relationship between narcissism and PAGO. Hypothesis 14 was supported based on the zero-order correlation ($r = .29$, $p < .05$). However, when critical thinking ability and responsibility were controlled, the amount of variance in PAGO explained by narcissism was negligible [$\beta = .20$, p = ns] (see Table 15c). In sum, narcissism was positively related to PPGO, supporting Hypothesis 13. Narcissism was negatively related to PAGO based on the zero-order correlation providing some support for Hypothesis 14, although controlling for individual difference variables negated this relationship. Finally, contrary to expectations, the evidence suggested a positive relationship between narcissism and LGO, rejecting Hypothesis 12.

Hypothesis Tests of Partially Mediated Relationships.

Hypothesis 15 and Hypothesis 16 included mediated relationships between predictor variables and the goal outcome variables. Because goal outcome

Table 15

Narcissism and Control Variables Predicting the Goal Orientation Dimensions

Table 15*a*

Narcissism and Control Variables Predicting LGO (N = 89)

	DV: LGO					
Variables	B	*SE B*	*β*	*r*	*Partial r*	*Part r*
Step 1						
Critical Thinking	.01	.01	.22*	.22	.22	.22
Responsibility	.00	.01	.02	.04	.02	.02
Step 2						
Critical Thinking	.02	.01	.28*	.22	.29	.27
Responsibility	.03	.01	.22*	.04	.21	.19
Narcissism	.03	.01	.43*	.26	.37	.36

Note. R^2 = .05 for Step 1; ΔR^2 = .13 for Step 2 ($p < .05$). LGO = Learning Goal Orientation. Observed statistical power (α = .05) = .95 to find a significant change in R^2 based on a medium effect size (η = .15). $^*p < .05$.

Table 15b

Narcissism and Control Variables Predicting PPGO (N = 89)

	DV: PPGO					
Variables	B	*SE B*	*β*	*r*	*Partial r*	*Part r*
Step 1						
Critical Thinking	.00	.01	-.04	-.06	-.04	-.04
Responsibility	-.03	.02	-.18	-.19	-.18	-.18
Step 2						
Critical Thinking	.00	.01	.03	-.06	.03	.03
Responsibility	.01	.02	.04	-.19	.04	.04
Narcissism	.05	.01	.47*	.44	.41	.40

Note. R^2 = .04 for Step 1; ΔR^2 = .16 for Step 2 ($p < .05$). PPGO = Performance-Prove Goal Orientation. Observed statistical power (α = .05) = .95 to find a significant change in R^2 based on a medium effect size (η = .15). $^*p < .05$.

Table 15c

Narcissism and Control Variables Predicting PAGO (N = 89)

	DV: PAGO					
Variables	B	*SE B*	*β*	*r*	*Partial r*	*Part r*
Step 1						
Critical Thinking	.01	.01	.10	.07	.11	.10
Responsibility	-.07	.02	-.31*	-.30	-.31	-.31
Step 2						
Critical Thinking	.01	.01	.13	.07	.14	.13
Responsibility	-.05	.02	-.22	-.30	-.20	-.19
Narcissism	.03	.02	.20	.28	.18	.17

Note. R^2 = .10 for Step 1; ΔR^2 = .03 for Step 2 (p = ns). PAGO = Performance-Avoid Goal Orientation. Observed statistical power (α = .05) = .95 to find a significant change in R^2 based on a medium effect size (η = .15). $^*p < .05$.

variables are included, two tests of each hypothesis were conducted: 1) one test not including control variables, and 2) one test including control variables.

Hypothesis 15 stated that the relationship between CSE and feedback-goal correspondence would be mediated by LGO and PPGO. Hypothesis 15 was not supported in either test of Hypothesis 15 (see Table 16). Of the 4 Steps used to test for mediation, support was found for Step 2, but not for Step 1, Step 3, and Step 4. To illustrate, when control variables were not included in the analyses, the data did not support a direct relationship between CSE and feedback-goal correspondence (β = .03, p = ns) in Step 1. However, according to James and colleagues (James, Muliak, & Brett, 2006), it is not necessary to have a significant direct effect between the predictor and outcome variables in order to demonstrate mediation. In Step 2, there was a relationship between the predictor variable and each of the mediator variables, as CSE was significantly related to LGO (β = .24, $p < .05$) and PPGO (β = -.34, $p < .05$). In Step 3, neither of the mediator variables was related to the criterion variable. That is, feedback-goal correspondence was not significantly related to LGO (β = -.09, p = ns) or PPGO (β = -.17, p = ns). In Step 4, the indirect effect of the predictor variable on the outcome variable was examined by regressing feedback-goal correspondence onto CSE after controlling for extraneous factors. The indirect effect of CSE on feedback-goal correspondence was not significant, β = .01, ΔR^2 = .00, F (1, 93) = .51, p = ns. Because the relationships in Step 3 and Step 4 were not significant, Hypothesis 15 was not supported.

Hypothesis 16 stated that the relationship between narcissism and goal quality would be mediated by PPGO and PAGO, and was examined using hierarchical

Table 16

Examination of LGO & PPGO as Mediators of the Relationship Between CSE and Feedback-Goal Correspondence

Test for Partial Mediation:	Step1		Step 2				Step 3				Step 4		
	Direct Effect of CSE on FGC		Direct Effect of CSE on LGO		Direct Effect of CSE on PPGO		Direct Effect of LGO on FGC		Direct Effect of PPGO on FGC		Indirect effect of CSE on FGC		Partially Mediated
	B	ΔR^2	β	ΔR^2	β	ΔR^2	β	ΔR^2	*B*	ΔR^2	β	ΔR^2	
Not controlling for extraneous variables[a]	.03		.24*		-.34*		-.09		-.17		.01	.00	No
Controlling for extraneous variables[b]	.11	.01	.22	.04	-.41*	.14*	-.05	-.05	-.05	.00	.13	.01	No

Note. For the analyses controlling for extraneous variables, and for the analyses examining the indirect effect of CSE on the DV with the mediating variables controlled for, ΔR^2 represents the amount of additional variance explained by the predictor variable once the extraneous variables are controlled. CSE = Core Self-Evaluation; LGO = Learning Goal Orientation; PPGO = Performance-Prove Goal Orientation; FGC = Feedback-Goal Correspondence. [a] $N = 90$, Observed statistical power ($\alpha = .05$) = .95 based on a medium effect size ($\eta = .15$). [b] $N = 65$, Observed statistical power ($\alpha = .05$) = .87 to find a significant change in R^2 based on a medium effect size ($\eta = .15$). * $p < .05$.

regression. Again, based on all four of the tests for mediation, Hypothesis 16 was not supported (see Table 17). To illustrate, when control variables were not included in the analyses, the relationships in 3 of the 4 steps for testing for partial mediation were not supported. Specifically, in Step 2, narcissism was related to PPGO (β = .27, p < .05) and PAGO (β = .42, p < .05). However, narcissism was not significantly related to goal quality in Step 1 (β = .02, p = ns), goal quality was not related to either PPGO (β = -.05, p = ns) or PAGO (β = -.15, p = ns) in Step 3, and narcissism did not contribute a significant portion of variance to goal quality after PPGO and PAGO were controlled in Step 4 [β = -.02, ΔR^2 = 00, F (, 82) = .09, p = ns]. The relationship between narcissism and goal quality was not mediated by PPGO and PAGO in this study, therefore Hypothesis 16 was not supported.

Post hoc analyses

Post hoc analyses were conducted in order to better understand the study findings. The data was divided into subgroups based on gender and career discipline, and group comparisons were made. Based on the findings of the group comparisons, the hypotheses were reexamined controlling for gender and profession.

Student's *t-test* was used to examine differences in mean scores on the study variables between men and women (Table 18). Power to detect a statistically significant difference (α = .05) based on a medium effect size (η = .50) was low. Indeed, there was no statistically significant difference between men and women on CSE, LGO, PPGO, PAGO, goal quality, or feedback-goal correspondence. However, scores on the narcissism measure were significantly higher for men (M = 25.45, SD = 6.75) than for women (M = 21.60, SD= 5.14), t (29.25) = 2.61, p < .05.

Table 17

Examination of PPGO and PAGO as Mediators of the Relationship between Narcissism and Goal Quality

Test for Partial Mediation:	Step1		Step 2				Step 3				Step 4		
	Direct Effect of Narcissism on QC		Direct Effect of Narcissism on LGO		Direct Effect of Narcissism on PPGO		Direct Effect of PPGO on QC		Direct Effect of PAGO on QC		Indirect effect of Narcissism on QC		Partially Mediate
	β	ΔR^2	β	ΔR^2	β	ΔR^2	β	ΔR^2	β	ΔR^2	β	ΔR^2	
Not controlling for extraneous variables[a]	.02		.27*		.42*		-.05		-.15		-.02	.00	No
Controlling for extraneous variables[b]	.10	.01	.44*	.12*	.44*	.12*	-.03	.00	-.07	.00	.13	.01	No

Note. For the analyses controlling for extraneous variables, and for the analyses examining the indirect effect of CSE on the DV with the mediating variables controlled for, ΔR^2 represents the amount of additional variance explained by the predictor variable once the extraneous variables are controlled. PPGO = Performance-Prove Goal Orientation; PAGO = Performance-Avoid Goal Orientation; GQ = Goal Quality. [a] $N = 81$, Observed statistical power ($\alpha = .05$) = .93 based on a medium effect size ($\eta = .15$). [b] $N = 65$, Observed statistical power ($\alpha = .05$) = .87 to find a significant change in R^2 based on a medium effect size ($\eta = .15$). * $p < .05$.

Table 18
T-Tests Analysis of Gender Differences

	Males			Females				
Variables	N	M	SD	N	M	SD	t	df
CSE	88	4.08	.46	17	4.04	.30	-.41	103
LGO	88	4.40	.46	17	4.29	.69	.60[a]	18.80
PPGO	88	3.27	.72	17	3.24	.56	-.16	103
PAGO	88	2.34	.87	17	2.43	.86	.40	103
Narcissism	79	25.45	6.75	17	21.60	5.14	2.61[a] *	29.25
Critical Thinking	95	63.63	7.92	18	60.94	6.79	-1.35	111
Responsibility	79	25.75	4.34	17	27.68	3.25	1.73[a]	94
Past Feedback	80	1.58	1.19	16	1.50	1.03	-.24[a]	94
Workshops	80	2.56	2.59	17	2.41	2.40	-.22	95
Hours of T & D	76	59.72	56.62	15	58.00	64.16	-.06	89
Goal Quality	85	3.05	.81	15	2.97	.44	-.53 [a]	34.00
FGC	85	.50	.23	15	.42	.21	-1.21	98

Note. [a] Represents Student's *t* tests that were tested based on unequal variances. Unequal variances were determined based on significant values of Levene's F Statistic. CSE = Core Self-Evaluation; LGO = Learning Goal Orientation; PPGO = Performance Prove Goal Orientation; PAGO = Performance Avoid Goal Orientation. GQ = Goal Quality. Observed statistical power ranged from .54 to .61 to find a significant difference ($p < .05$) between the two independent means based a medium effect (.50) for a Student's *t*. $^{*}p < .05$.

Differences related to general career discipline were also examined. Means, standard deviations, and sample size of each career discipline are reported in Table 19. Interestingly, of the seven individuals who remained enrolled in the MBA program but failed to submit leader development goals, all were Physicians. A one-way analysis of variance (ANOVA) was used to examine mean differences between the three career disciplines. ANOVA statistics examining group differences for each study variable are displayed in Table 20, although nonsignificant results should be interpreted with caution as the average observed statistical power ($\alpha = .05$) to find significant results based on a medium effect size ($\eta = .25$) was .61. There were several significant differences among the groups. Specifically, LGO scores differed significantly for the three disciplines, F (2, 102) = 3.38, $p < .05$, as did scores on several of the control variables including the number of workshops attended [F (2, 94) = 3.63, $p < .05$] and number of hours spent in training and development [F (2, 88) = 3.55, $p < .05$]. Furthermore, goal quality scores differed for the three groups [F (2, 97) = 14.76, $p < .05$]. Fisher's least significant difference procedure (Fisher's LSD) was used to further examine the differences among the three groups (Table 21). Scores for physicians consistently deviated from scores of the other two career disciplines whereas scores for aeronautical engineers and senior-level executives did not tend to differ from each other.

Because there were mean differences related to gender and career discipline on some of the study variables, the hypotheses were reexamined controlling for gender and discipline. Specifically, means, standard deviations, and correlations when gender and profession were controlled are presented in Table 22. For Hypotheses 1 through 14, analyses were also conducted including control variables (see Appendix B for a full

Table 19

Means, Standard Deviations, and Sample Size Based on Each Career Discipline

	Aeronautical Engineers			Senior Level Executives			Physicians		
Variables	N	M	SD	N	M	SD	N	M	SD
CSE	26	4.06	.42	18	4.15	.38	61	4.06	.46
LGO	26	4.19	.50	18	4.33	.52	61	4.48	.47
PPGO	26	3.14	.65	18	3.13	.63	61	3.35	.73
PAGO	26	2.14	.71	18	2.21	.88	61	2.48	.90
Narcissism	25	23.32	6.94	17	25.19	6.87	54	25.26	6.45
Critical Thinking	26	61.69	7.89	17	63.00	8.26	70	63.81	7.66
Responsibility	25	26.43	4.05	17	26.68	3.90	54	25.76	4.42
Past Feedback	23	1.83	.89	17	1.65	1.22	56	1.43	1.23
Workshops	24	2.04	1.71	17	1.41	1.46	56	3.09	2.94
Hours of T & D	18	90.89	65.04	17	55.29	58.03	56	50.80	52.23
Goal Quality	26	3.58	.73	17	3.21	.66	57	2.73	.65
FGC	26	.54	.22	17	.52	.18	57	.46	.25

Note. CSE = Core Self-Evaluation; LGO = Learning Goal Orientation; PPGO = Performance-Prove Goal Orientation; PAGO = Performance-Avoid Goal Orientation. FGC = Feedback-Goal Correspondence.

Table 20
ANOVA Statistics for Across Discipline Differences

Variables		SS	*df*	MS	*F*
CSE					
	Between Groups	.10	2	.05	.76
	Within Groups	19.67	102	.19	
	Total	19.75	104		
LGO					
	Between Groups	1.61	2	.81	3.38*
	Within Groups	24.30	102	.24	
	Total	25.91	104		
PPGO					
	Between Groups	1.11	2	.56	1.16
	Within Groups	49.11	102	.48	
	Total	50.23	104		
PAGO					
	Between Groups	2.53	2	1.26	1.73
	Within Groups	74.58	102	.73	
	Total	77.10	104		
Narcissism					
	Between Groups	68.28	2	34.14	.77
	Within Groups	4116.38	93	44.26	
	Total	4184.65	95		
CTA					
	Between Groups	86.19	2	43.10	.71
	Within Groups	6700.12	110	60.91	
	Total	6786.32	112		
Responsibility					
	Between Groups	14.77	2	7.38	.411
	Within Groups	1671.59	93	17.97	
	Total	1686.35	95		
Past Feedback					
	Between Groups	2.72	2	1.36	1.01
	Within Groups	124.90	93	1.34	
	Total	127.63	95		
Workshops					
	Between Groups	44.49	2	22.25	3.63*
	Within Groups	575.63	94	6.12	
	Total	620.12	96		
Hours T&D					
	Between Groups	22270.14	2	11135.07	3.55*
	Within Groups	275842.10	88	3134.57	
	Total	298112.30	90		

Table 20 *(Continued)*

Variables		SS	*df*	MS	*F*
Goal Quality					
	Between Groups	13.42	2	6.71	14.76*
	Within Groups	44.07	97	.45	
	Total	57.49	99		
FGC					
	Between Groups	.15	2	.07	1.39
	Within Groups	5.12	97	.05	
	Total	5.26	99		

Note. Although the three groups have unequal sample sizes, ANOVA tends to be robust in situations of unequal sample sizes as long as the variance across the groups is relatively homogeneous. That is, the largest variance cannot be more than four times the variance of the lowest variance (p. 340; Howell, 2002). Thus, the variance for the variables is relatively homogeneous across the three groups. Observed statistical power to find a medium effect (.25) based on a one-way ANOVA ranged from .55 to .65. * $p < .05$.

Table 21

Career Discipline Comparisons Based on Fisher's LSD

Variables	Engineers	Executives	Physicians
LGO	4.19_{a}	4.33_{ab}	4.48_{b}
No. of Workshops	2.04_{ab}	1.41_{a}	3.09_{b}
No. of Hours T&D	90.98_{a}	55.29_{ab}	50.80_{b}
Goal Quality	3.58_{a}	3.21_{a}	2.73_{b}

Note. Means in the same row that do not share subscripts differ at $p < .05$ in the Fisher's LSD mean difference comparison.

Table 22

Correlations for Study Variables Controlling for Gender and Career Discipline

	Variable	*M*	*SD*	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.
1.	Self-Esteem	4.33	.49	--														
2.	Self-Efficacy	4.44	.46	.81*	--													
3.	Locus of Control	3.91	.42	.36*	.39*	--												
4.	Neuroticism	2.29	.73	-.56*	-.54*	-.20*	--											
5.	CSE	4.08	.44	.85*	.83*	.48*	-.87*	--										
6.	LGO	4.38	.50	.21*	.24*	.32*	-.13	.25*	--									
7.	PPGO	3.26	.70	-.29*	-.25*	.14	.42*	-.35*	.22*	--								
8.	PAGO	2.35	.86	-.38*	-.41*	-.11	.56*	-.52*	-.11	.45*	--							
9.	Narcissism	24.74	6.64	-.04	.01	.11	.23*	-.11	.25*	.42*	.30*	--						
10.	Critical Thinking	63.20	7.78	-.14	-.01	-.25*	.03	-.11	.17*	-.09	.03	-.20*	--					
11.	Responsibility	26.09	4.21	.23*	.21	.05	-.27*	.26*	.07	-.19*	-.31*	-.49*	.09	--				
12.	Past Feedback	1.56	1.16	.25*	.14	.20*	-.23*	.27*	.14	.03	-.21*	.06	-.13	.03	--			
13.	Workshops	2.54	2.54	.16	.06	.09	-.18*	.18*	.24*	-.01	-.04	.09	-.11	.06	.14	--		
14.	Hours of T & D	59.57	57.55	.21*	.14	.12	-.24*	.25*	.14	-.02	-.11	-.15	.09	.22*	.12	.46*	--	
15.	Goal Quality	3.03	.76	.06	.21	.02	-.14	.15	.10	.01	-.06	.05	.17*	.12	-.02	.07	.20*	--
16.	FGC	.49	.23	-.05	.03	.02	-.06	.03	-.06	-.16	-.20*	-.19*	.23*	.10	-.04	-.11	-.07	.19*

Note. Reliabilities based on Cronbach's Alpha are presented on the diagonal. A dash is used for those variables in which Cronbach's Alpha could not be computed, was irrelevant, or was not used to measure reliability. CSE = Core Self-Evaluation; LGO = Learning Goal Orientation; PPGO = Performance-Prove Goal Orientation; PAGO = Performance-Avoid Goal Orientation. N = 87- 105 for correlations involving hypothesized relationships. Power to observe a significant effect ($p < .05$) ranged from .90 to .94 given a medium effect size ($\eta = .30$). $^{*}p < .05$, one-tailed.

presentation of the results of the regression analyses). Results of the hierarchical regression analysis examining Hypotheses 15 and 16 when controlling for gender and career discipline are presented in Table 23 and Table 24.

With one notable exception, controlling for gender and profession did not have an impact on the results of the hypothesis tests. Hypothesis 2, which stated a negative relationship between narcissism and feedback-goal correspondence, was not supported in the initial analyses. Controlling for gender and career discipline did result in a significant zero-order correlation in the expected direction ($r = -.19$, $p < .05$). However, when critical thinking, responsibility, past feedback experience, number of workshops, and number of hours spent in training and development were controlled, the amount of feedback-goal correspondence explained by narcissism was insignificant ($\beta = -.10$, p = ns) (See Table B2 in Appendix B).

Importantly, controlling for gender and profession also made a notable impact on the relationship between one of the control variables, critical thinking ability, and the two goal outcome variables, goal quality and feedback-goal correspondence. Specifically, in the previous analyses, critical thinking ability was related to feedback-goal correspondence, but was not related to goal quality. When gender and profession were controlled, critical thinking ability was significantly related to goal quality ($r = .17$, $p < .05$) and feedback-goal correspondence ($r = .23$, $p < .05$).

Table 23

Examination of LGO & PPGO as Mediators of the Relationship between CSE and Feedback-Goal Correspondence, Controlling for Gender and Career Discipline

Test for Partial Mediation:	Step1		Step 2				Step 3				Step 4		Partial Mediation
	Direct Effect of CSE on FGC		Direct Effect of CSE on LGO		Direct Effect of CSE on PPGO		Direct Effect of LGO on FGC		Direct Effect of PPGO on FGC		Indirect effect of CSE on FGC		
	β	ΔR^2	β	ΔR^2	β	ΔR^2	β	ΔR^2	β	ΔR^2	β	ΔR^2	
Not controlling for extraneous variables[a]	.02	.00	.24*	.06*	-.34*	.12*	-.10	.01	-.16	.03	.00	.00	No
Controlling for extraneous variables[b]	.08	.01	.22	.04	-.41*	.14*	-.07	.01	-.04	.00	.11	.01	No

Note. For the analyses controlling for extraneous variables, and for the analyses examining the indirect effect of CSE on the DV with the mediating variables controlled for, ΔR^2 represents the amount of additional variance explained by the predictor variable once the extraneous variables are controlled. CSE = Core Self-Evaluation; LGO = Learning Goal Orientation; PPGO = Performance-Prove Goal Orientation; FGC = Feedback-Goal Correspondence. [a] $N = 90$, Observed statistical power ($\alpha = .05$) = .95 based on a medium effect size ($\eta = .15$). [b] $N = 65$, Observed statistical power ($\alpha = .05$) = .87 to find a significant change in R^2 based on a medium effect size ($\eta = .15$). $^*p < .05$.

Table 24

Examination of PPGO and PAGO as Mediators of the Relationship Between Narcissism and Goal Quality, Controlling for Gender and Career Discipline

Test for Partial Mediation:	Step1		Step 2				Step 3				Step 4		Partial Mediation
	Direct Effect of Narcissism on GQ		Direct Effect of Narcissism on LGO		Direct Effect of Narcissism on PPGO		Direct Effect of PPGO on GQ		Direct Effect of PAGO on GQ		Indirect effect of Narcissism on GQ		
	β	ΔR^2	β	ΔR^2	β	ΔR^2	β	ΔR^2	β	ΔR^2	β	ΔR^2	
Not controlling for extraneous variables[a]	.06	.00	.23*	.05*	.42*	.16*	.02	.00	-.01	.00	-.01	.00	No
Controlling for extraneous variables[b]	.13	.01	.42*	.11*	.42*	.11*	.09	.01	.10	.01	.13	.01	No

Note. For the analyses controlling for extraneous variables, and for the analyses examining the indirect effect of CSE on the DV with the mediating variables controlled for, ΔR^2 represents the amount of additional variance explained by the predictor variable once the extraneous variables are controlled. PPGO = Performance-Prove Goal Orientation; PAGO = Performance-Avoid Goal Orientation; GC = Goal Quality. [a] $N = 81$, Observed statistical power ($\alpha = .05$) = .93 based on a medium effect size ($\eta = .15$). [b] $N = 65$, Observed statistical power ($\alpha = .05$) = .87 to find a significant change in R^2 based on a medium effect size ($\eta = .15$). *$p < .05$.

CHAPTER IV

Discussion

It is currently in vogue for organizations and universities to use leader development programs to boost the skills of upper-level managers. However, very few studies have examined the factors that are related to the effectiveness of leader development programs. The primary purpose of this study was to examine dispositional factors that may be related to 1) the formation of quality leader development goals and 2) the correspondence between leader development feedback and leader development goals. A secondary purpose of this study was to examine the relationships among the dispositional factors core self-evaluation (CSE), narcissism, and goal orientation. The data yielded results that supported the majority of the hypotheses regarding the relationships among the dispositional factors. Furthermore, the results led to some interesting conclusions regarding the control variables and the nature of the goal quality and feedback-goal correspondence variables. However, the data did not generally support the hypotheses regarding the dispositional antecedents of goal quality and feedback goal correspondence.

In this study, the hypotheses that were not supported contribute just as much to the leadership development literature as do the hypotheses that were supported. That is, if the tenets that preceded the hypotheses were valid, and the tests of the hypotheses were reliable, then support should have been found for all sixteen of the hypotheses. The fact that none of the hypotheses regarding the dispositional antecedents of goal quality and feedback-goal correspondence were fully supported is perplexing. Importantly, the failure

to support several of the hypotheses is indicative of a need to change the way that the literature describes several of the variables included in the study.

The results of the hypothesis tests regarding the dispositional antecedents of the goal outcome variables are discussed in the next section, followed by a discussion of the tests of the hypotheses regarding the relationship among the dispositional variables. In each section, several explanations are given for the results of the hypothesis tests. Subsequently, the limitations of the study are summarized, the implications are discussed, and directions for future research are suggested.

Hypothesis Tests of Dispositional Antecedents of Goal Outcomes

Ten hypotheses forwarded relationships between the dispositional factors and the goal outcome factors; half regarded goal quality, and the other half regarded feedback-goal correspondence. Of the five hypotheses related to goal quality, none were substantially supported by the data. Specifically, the hypotheses stated that goal quality would be positively related to CSE (Hypothesis 1), learning goal orientation (LGO; Hypothesis 3), and performance-prove goal orientation (PPGO; Hypothesis 5), and negatively related to performance-avoid goal orientation (PAGO; Hypothesis 7). The hypotheses also stated that the relationship between narcissism and goal quality would be mediated by PPGO and PAGO (Hypothesis 16). Support was not found for Hypothesis 1, Hypothesis 3, Hypothesis 5, Hypothesis 7, and Hypothesis 16. In further contradiction of Hypothesis 1 and Hypothesis 3, CSE and LGO scores were lower for individuals who submitted goals than for those who did not submit goals. Although a specific hypothesis was not stated regarding the initial submittal of goals, it was implied by Hypothesis 1 and

Hypothesis 3 that CSE and LGO should be positively, rather than negatively, related to goal submittal.

The other five hypotheses concerned the relationship between dispositional variables and feedback-goal correspondence. It was expected that feedback-goal correspondence would be negatively related to narcissism (Hypothesis 2), PPGO (Hypothesis 6), and PAGO (Hypothesis 8), and positively related to LGO (Hypothesis 4). It was also stated that the relationship between CSE and feedback-goal correspondence would be mediated by LGO and PPGO (Hypothesis 15). Initial support was found for some of the hypotheses. That is, feedback-goal correspondence was negatively related to PAGO and PPGO, supporting Hypothesis 6 and Hypothesis 8. Furthermore, when gender and profession were controlled, feedback-goal correspondence was also negatively related to narcissism, supporting Hypothesis 2. Nonetheless, when the control variables were included in the analyses (e.g., critical thinking ability, responsibility, past feedback experience, number of workshops attended, and number of hours spent in training and development), the relationships stated in Hypotheses 2, 6, and 8 were negated.

There are multiple conceivable explanations for the null relationships between the dispositional and goal outcome variables. It is possible that the lack of significant results occurred because these dispositional variables are not related to goal quality and feedback-goal correspondence. However, given that some of the relationships were supported when control variables were not included, and given that significant relationships have been found among similar variables in settings outside of leader development, there must be more to the explanation than a simple lack of relationships. First, controlling for critical thinking ability, responsibility, past feedback experience,

number of workshops, and number of hours of training and development influenced the outcome of several of the hypothesis tests. The importance of these control variables should be considered, as including these controls limited the conclusions of the study. Second, the failure to support the hypotheses may have been caused by issues in the measure of the dispositional variables, such as restriction of range or the nature of self-report measurement. Third, the problem may have been due to the measurement of the goal quality and feedback-goal correspondence measure. Each of these explanations is discussed further in the following sections.

The Influence of Control Variables on the Study Outcomes

Several of the control variables were related to goal quality and feedback-goal correspondence, and including these variables in the study influenced the outcomes of the hypothesis tests. Specifically, feedback-goal correspondence was directly influenced by narcissism (Hypothesis 2), PPGO (Hypothesis 6), and PAGO (Hypothesis 8), but these relationships were seriously overshadowed by the relationships between two of the control variables and feedback-goal correspondence. In particular, critical thinking ability was consistently related to feedback-goal correspondence. The question remains whether an *important* portion of variance in feedback-goal correspondence is explained by narcissism, PPGO, and PAGO. That is, we know that these variables do not explain variance in feedback-goal correspondence beyond that explained by the control variables. However, understanding that these variables are related to feedback-goal correspondence in leader development programs is still extremely important for understanding the effectiveness of these programs. For example, leader development has been cited as one method to address issues associated with narcissistic leaders (Howell & Avolio, 1992).

Understanding that narcissism is related to feedback-goal correspondence is vital for the evaluation of whether leader development is an appropriate tool for dealing with narcissistic leaders, even if the variance in feedback-goal correspondence is also explained by other variables. Specifically, if narcissism is negatively related to feedback-goal correspondence, then the appropriateness of prescribing leader development programs as a means to address narcissism in organizations should be reconsidered. Thus, narcissism, PPGO, and PAGO should not be entirely discredited as dispositional antecedents of feedback-goal correspondence, although including control variables in the study negated these relationships.

The Influence of the Measure of Dispositional Variables on Study Outcomes

The unsupported hypotheses could be attributed to problems with the measures of the dispositional variables used in the study. First, the manifest indicators of CSE did not relate to the variables in this study as they have in past studies. In replication of past research (Judge et al., 1997, 1998, 2001, 2005), CSE was treated as a latent construct with 4 manifest indicators: self-esteem, self-efficacy, locus of control, and neuroticism. Because the four variables are treated as manifest indicators of CSE, the four should share a similar pattern of relationships with other variables. However, that was not true in this study. For instance, the relationship between self-efficacy and goal quality was positive and approached statistical significance, whereas the relationship between locus of control and goal quality was negative and approached statistical significance. Similarly, self-efficacy and self-esteem were negatively related to PPGO, but locus of control was positively related to PPGO. The relationships observed in this study are similar to the relationships observed in other research. That is, in one study, locus of

control was negatively related to introjected goal pursuit and goal attainment, whereas self-esteem and self-efficacy were positively related to these variables (Judge, Bono, Erez, & Locke, 2005). If self-esteem, self-efficacy, and locus of control are truly manifest indicators of the same latent construct, then they should be similarly related to goal quality, PPGO, and other variables. These results call into question the CSE literature, suggesting that relationships among the manifest indicators may vary depending on the examined outcomes, the study setting, or the study population.

Furthermore, given that the dispositional antecedents predict who initially chooses to participate in leader development, the range of scores on the dispositional measures is likely restricted for those that are enrolled in the program. For example, if LGO predicts choice to participate in leader development, then participant LGO scores are likely restricted to the upper end of the LGO scale. Similarly, if self-efficacy (a manifest indicator of CSE) predicts initial choice to participate in leader development programs, then it is logical that the CSE scores of participants are also restricted to the upper end of the CSE scale. Because LGO and CSE predict who initially chooses to enroll in leader development programs, then the scores on these measures may not have sufficient variance to differentiate among individuals already selected into leader development programs. As a result, the fact that these variables are valid predictors of choice to participate in leader development makes them insufficient predictors of participation for those already enrolled in a leader development program. Thus, although LGO and CSE are characteristics that predict who chooses to participate in leader development programs, additional work is needed to explain the characteristics of individuals who participate *successfully* in leader development programs.

The self-report nature of the dispositional variables may also be to blame for the lack of significant results. Self-report measures often capture people's explicit perceptions, and these explicit perceptions are often very different from their implicit perceptions. To clarify, Greenwald and Banjai (1995) describe implicit reactions as those that are based on past feelings or experiences of which the individual is consciously unaware, whereas explicit reactions are based on past feelings or experiences of which the individual is consciously aware. Whereas explicit perceptions are measured with direct instruments (such as self-report questionnaires), complicated indirect measures are needed to measure implicit perception. The explicit nature of the measures of disposition in this study likely influenced the study outcomes. For example, indirect measures of self-esteem (a manifest indicator of CSE) often result in different outcomes than direct measures of self-esteem, and implicit measures of narcissism have been linked to different outcomes than explicit measures of narcissism.

In summary, future research should take into consideration several characteristics of the dispositional variables. First, the CSE construct should be further explored before it is used in other settings. Second, additional work is needed to explain the characteristics associated with successful participation in leader development programs. Third, implicit and explicit perceptions should be measured in leader development research. Just as the measures of the dispositional variables probably influenced the study outcomes, it is likely that the measure of the goal variables also influenced the results.

The influence of the Goal Outcome Measures on the Study Outcomes

Other explanations for the study results involve the two goal outcome measures: goal quality and feedback-goal correspondence. It could be that the outcome measures

simply did not measure what they were purported to measure. For instance, support was not found for any of the hypotheses regarding goal quality, and only limited support was found for the hypotheses regarding feedback-goal correspondence. Indeed, when extraneous factors were controlled, none of the goal outcome hypotheses were supported. However, it does appear that the two goal outcome measures were measuring something at least similar to the intended constructs. Specifically, critical thinking ability was significantly related to both goal quality and feedback-goal correspondence when gender and profession were controlled. Furthermore, narcissism, PPGO, and PAGO explained variance in feedback-goal correspondence before control variables were considered. These significant relationships lend some credibility to the goal quality and feedback-goal correspondence measures, as these findings correspond with past research.

To illustrate, several authors have discussed feedback response as an important component of the performance goal orientation dimensions (Brett & Vandewalle, 1999; Miller, Behrens, Greene, & Newman, 1993; Sujan, Weitz, & Kumar, 1994; Vandewalle & Cummings, 1997). Similarly, narcissism has repeatedly been related to a tendency to reject negative feedback (Bushman & Baumeister, 1998; Helland & Blair, 2005; Hogan, 1994; Kohut, 1971; Kernberg, 1986; Kernis & Sun, 1994; Kets de Vries & Miller, 1985; Smalley & Stake, 1996; Twenge & Campbell, 2003; Webster & Kirkpatrick, 2006). It follows that feedback-goal correspondence should be negatively related to PPGO, PAGO, and narcissism. Moreover, intelligence consistently predicts successful training outcomes (Ceci & Papierno, 2005; Day, Arthur, Bell, Edwards, Bennett, et al., 2004; Devine & Philips, 2001; Kanfer & Ackerman, 1989), thus intelligence should also be related to feedback-goal correspondence and goal quality behaviors during leader development.

The fact that the relationships observed in the current research correspond with the relationships observed in past research provide some validation to the measures of goal quality and feedback-goal correspondence. Nevertheless, other evidence suggests that the two measures did not represent precise measures of the intended constructs.

The purpose of the feedback-goal correspondence measure was to identify which individuals attended to the feedback they were given, and carried the feedback forward to the formation of leader development goals. However, a couple of specific limitations could have caused a problem in this measurement. First, it was not assessed which elements of the leader development feedback were relevant to each individual's job. Second, it was not assessed whether the feedback in the leader development program corresponded with feedback that the individuals received in the past. According to Prochaska, DiClemente, and Norcross (1995) repeated knowledge of weaknesses is related to the decision to improve the weaknesses. Major behavior change occurs only after several failed attempts to change behavior. Whether the leader development feedback was consistent with past feedback, and whether the individual had set similar goals in the past, may have influenced the goal quality and feedback-goal correspondence scores. However, the importance of each feedback factor to the individual, the consistency between the current feedback and past feedback, and past goal setting were factors that were not examined in the study. Measuring these factors would have allowed the author to determine whether the factors had an important influence on the study outcomes.

Similarly, the goal quality measure may have also been somewhat flawed. The purpose of the goal quality measure was to capture variance in participant intention to

participate and engage in the development opportunity. The intent was to distinguish those who intended to use the development program to "learn and grow" from those who intended to merely "show-up" at the leader development sessions as a requirement of the MBA degree. However, similar to measures used in past research (Riechard, 2006), goal quality was measured strictly based on specificity and difficulty of the goals that were initially submitted. It could be that the goal quality measure was simply too sterile to get at the construct described in the literature review. A better measure may have included an element of "perceived authenticity" on the part of the SMEs' evaluation of the goals, or a survey of the coaches' opinions regarding participation after the individuals' first leader development meeting.

The nature of the instructions to participants for goal formation could have also tainted both the feedback-goal correspondence and goal quality measures. The leader development goal instructions suggested that the individuals form 4 different types of goals: Developing Self, Developing Others, Personal, and Wild Card Goals. Because the instructions suggested that the participants could base their goals on any combination of the 4 suggested categories, a few people submitted 4 "developing self" or "developing others" goals, and a few other people submitted 4 "personal" or "wild card" goals. Anecdotally, the "personal" and "wild card" goals tended to be less related to dimensions of feedback than were "developing self" and "developing others" goals. Including these goals in the feedback-goal correspondence measure could have reduced the fidelity of the measure. To illustrate, if an individual submitted two developing-self goals that corresponded with feedback, and two personal goals that did not correspond with feedback, the feedback-goal correspondence score was 50%. If another individual

submitted only two goals, and both corresponded with feedback, then the feedback-goal correspondence score was 100%. It may have been wise to exclude personal and wild card goals from the analyses when calculating the feedback-goal correspondence score. Similarly, it may have also been wise to calculate the goal quality score for the four types of goals separately. The fact that people submitted four different categories of goals likely influenced the fidelity of the goal quality and feedback-goal correspondence measures. Nevertheless, the generalizability study based on the goal quality measure indicated that the measure should generalize across the four goal categories.

Hypothesis Tests Among the Dispositional Variables

Six hypotheses were stated regarding the relationships among the dispositional variables. Three focused on the relationship between CSE and the goal orientation dimensions; the other three focused on the relationship between narcissism and the goal orientation dimensions. The results provided strong support for 2 of the 3 hypotheses that pertained to the relationship between CSE and each of the goal orientation factors. Specifically, the data indicated that CSE is positively related to LGO, supporting Hypothesis 9. The data also indicated that CSE is negatively related to PAGO, supporting Hypothesis 11. However, the results of the analyses indicate that CSE is negatively related to PPGO; this negative relationship is opposite of that which was stated in Hypothesis 10.

Intuitively, CSE should be positively related to PPGO. That is, like individuals with high self-esteem, individuals who have a PPGO tend to approach tasks in order to prove their competence to others. Additionally, Brett and Vandewalle (1999) described differences in self-concept as a way to differentiate between individuals with PPGO and

PAGO, suggesting that PPGO is related to positive self-concept and PAGO is related to negative self-concept. Nevertheless, other research has also indicated a null or negative relationship between CSE and PPGO based on a different sample (Blair, Meriac, & Bowler, 2007; Blair, Meriac, & Morris, 2007). The philosophical differences between CSE and PPGO regarding control over personal outcomes could be at the heart of the disparity between the two variables. That is, PPGO is associated with a fixed theory of ability, or the belief that the exertion of extra effort on a task does not improve performance (Dweck & Leggett, 1988). Thus, individuals with such a belief do not believe that they have the self-efficacy to influence their own performance. In contrast, high CSE is associated with high self-efficacy, or one's belief in their ability to handle life's challenges. The fact that PPGO is associated with a fixed theory of ability is in direct contrast to the high level of self-efficacy associated with CSE. Although PPGO has traditionally been associated with positive self-concept, the results of this study suggest that this association is erroneous: PPGO was inversely related to CSE in this study. Additional theory and research is needed in order to better understand this relationship.

The remaining 3 dispositional hypotheses concern narcissism's relationship with the goal orientation variables. The results of the study corroborated Hypothesis 13 and Hypothesis 14, as narcissism was positively related to both PPGO and PAGO. However, in opposition to the relationship stated in Hypothesis 12, narcissism was also positively related to LGO. One plausible explanation for the positive relationship between narcissism and LGO is that LGO individuals truly have grandiose ideas of themselves and their capabilities. One characteristic of individuals with an LGO is that they tend to persist in spite of negative feedback. Although past theory has depicted this persistence as

a positive attribute, it could also mean that individuals with an LGO tend to "explain" negative feedback as inaccurate. If so, then their willingness to persist in spite of negative feedback does not reflect that they are internalizing the feedback and using it to improve, but rather reflects that they are remaining ignorant of shortcomings despite receiving feedback. In this way, LGO could be associated with behavior similar to that displayed by narcissists.

In this section, several study issues were discussed as explanations for the failure to support some of the study hypotheses. Additional limitations to the study are reviewed in the next section, and the importance of the study is highlighted in spite of its limitations.

Limitations

There were several potential limitations of the study. First, like many studies in the leader development literature, the study was limited by sample size and demographic characteristics. Specifically, the sample size provided ample power to test the initial hypotheses. However, more power was desired for the hierarchical regressions and tests of subgroup differences. Furthermore, the majority of the participants in the leader development program were Caucasian, and the number of women in the study in comparison to men was not representative of the general population. Moreover, because all of the individuals enrolled in the program were also targeted to eventually work in the upper echelons of their organizations, it was likely that the individuals represented the upper-end of the CSE, LGO, and critical thinking ability scales. Increasing sample size and the diversity of the sample would have 1) boosted power for the post hoc analyses, and 2) allowed for a more comprehensive examination of the effects of gender, career

discipline, and cultural background on the study outcomes. Nevertheless, the population is somewhat representative of the population of most U.S. leader development programs.

Potential coach effects posed a second limitation in the study. Although participants were given the same instruction for the formation of goals, no matter who their leader development coach was, the coaches differed in their contact with the individuals prior to the formation of the leader development goals. Anecdotally, some coaches spoke with the participants about goal expectations and brainstormed with the participants regarding effective goal topics, whereas other coaches did not. This may have influenced the outcomes as participants with special instructions from coaches may have formed better leader development goals and had a more accurate understanding of their feedback than participants who did not receive special instructions from coaches. However, some individuals requested to be paired with a specific coach, often because they were extremely interested in the process and heard that the coach was hands-on and interactive. As a result, it was unrealistic to control for the effects of coaching differences as this may have also eliminated actual individual differences in level of interest, engagement, and participation in the process.

Finally, in summary of the points discussed in the previous section, there were limitations associated with the measures of the dispositional variables, the measures of the goal outcome variables, and the instructions given to the participants. Although it is impossible to measure the impact of each of these limitations, eliminating any one of them may have altered the results of the study. In an ideal research situation, the participants, assessment instruments, and goal instructions would be designed to overcome the previously mentioned limitations. However, given the cost, complicated

procedures, and high-caliber participants associated with leader development, controlling any one of the limitations is difficult; controlling all of the limitations is nearly impossible. Because the limitations in this study are somewhat typical of leader development research, this study makes a number of important contributions to the literature.

Implications and Future Research Directions

Despite limitations, this study is important for multiple reasons. The study makes important contributions to the literatures surrounding the dispositional variables and makes headway into several arenas for future research. The author did not find any previous research examining the relationship between narcissism and the goal orientation dimensions. Based on this study, both PPGO and PAGO are related to narcissism. These relationships make intuitive sense: the performance goal oriented dimensions (including PPGO and PAGO) are centered around the individual's concern with task performance. Narcissism is also centered around the individual's concern with task performance, with an additional desire to appear superior in comparison to everyone else who completes the task. Because of the similarities between narcissism and the performance goal orientation dimensions, it makes sense that narcissism is related to both PPGO and PAGO.

Contradictory to expectation, narcissism was also positively related to LGO. LGO individuals are touted as individuals who persist in their endeavors despite negative feedback. Narcissists are criticized as having grandiose ideas, too full of themselves to accept or attend to negative feedback. The positive relationship between narcissism and learning goal orientation in this study may indicate that the reason that some individuals with a LGO persist after failure is that they are unwilling to recognize their failure as a

reflection of their own weaknesses. Indeed, in this study, the relationship between LGO and feedback-goal correspondence was consistently negative and often approached statistical significance. Future research should examine the nature of the LGO dimension, and the etiology of the tendency of LGO individuals to persist in their endeavors despite negative feedback.

The current study also sheds light on the current conceptualization that PPGO is related to a positive self-concept. That is, CSE was positively related to LGO and negatively related to PPGO and PAGO. The negative relationship between CSE and PPGO was opposite the direction expected based on past theory. This unexpected negative relationship represents an important implication of this study. Brett and Vandewalle (1999) cite self-concept of the individual as a means to differentiate PPGO from PAGO, suggesting that PPGO is related to a positive self-concept whereas PAGO is related to a negative self-concept. The results of this study suggest that neither PPGO or PAGO are related to positive self-concept. Further research should explore the role of self-concept in differentiating PPGO from PAGO.

One of the main purposes of the study was to determine dispositional characteristics related to leader development goal quality and feedback-goal correspondence. Although it is not clear how the dispositional variables relate to the goal outcomes, it is clear that those individuals who submit high quality goals are not necessarily the same individuals who make use of the feedback that they receive during the leader development program. This has both practical and research implications. Leader development coaches and facilitators should remain cognizant of the difference between goal quality and feedback-goal correspondence, and avoid the assumption that

individuals who submit high quality goals are also making use of the feedback that they are given. Likewise, researchers should consider the outcomes that they include when conducting leader development research, differentiating between outcomes related to participation and outcomes related to making use of feedback.

Squires and Adler (1998) criticized performance appraisal systems, stating that the feedback was seldom tracked to see if it was actually used by the recipient. The mean feedback-goal correspondence score in this study suggests that approximately 50% of the topics discussed in the leader development goals corresponded with the leader development feedback. On one hand, the average feedback-goal correspondence score represents good news: people are paying attention to the feedback that they receive during the course of leader development, and are at least making goals to improve based on the feedback. This is important for practitioners, as it provides justification for the cost of developmental feedback and leader development programs. On the other hand, the feedback-goal correspondence score represents bad news: given the time and energy spent on leader development, only 50% of the goals submitted by participants pertain to the leader development feedback. This point is also important for practitioners, as it suggests that more work is necessary to increase the efficiency of leader development programs. For instance, leader development programs may benefit from creating systems that increase the percentage of goal topics that pertain to feedback during the program.

The feedback-goal correspondence score for leader development feedback in this study is consistent with results reported regarding responses to job performance feedback: people use the feedback that they receive approximately one-half of the time (Kluger & DeNisi, 1996). This finding is important for research, as it suggests that

Feedback-Intervention Theory (FIT) extends to leader development feedback. However, the feedback-goal correspondence measure in this study was not an exact replica of the measures used as the basis of FIT. That is, in this study, the number of goal topics was tallied, and a percent was calculated based on the number of goal topics that corresponded with feedback. In contrast, FIT was based on studies that tallied the number of areas in which the individual received feedback, and then calculated a percent based on the number of feedback topics that were represented in goals. The system for calculating the percent in this study could result in an entirely different outcome than the system for calculating the percent in the FIT studies. Future leader development research should replicate the tally and percent method used in the FIT studies in order to further verify the application of FIT to leader development feedback.

Even though people appear to be using leader development feedback to form goals, the findings in this study suggest that the general quality of goals submitted in leader development is questionable, as the average goal quality score was 2.84. On the goal difficulty measure, this score is approximately equivalent to the anchor, "Attainment of this goal would require a minimal amount of additional effort on the part of the participant"; on the goal specificity measure, this score is approximately equivalent to "The goal and the goal details are somewhat vague". The average goal quality scores are particularly disconcerting, given that difficult and specific goals are consistently related to performance. It is possible that this finding is unique to the leader development program, or that scores on the goal quality measure were rated too severely. Nonetheless, leader development facilitators should be made aware of the attributes associated with specific and difficult goals, and should subsequently encourage participants to include

these attributes in the goals that they form. Additional research is necessary to determine whether leader development goal quality is related to subsequent performance outcomes.

The sample of individuals who did not submit goals represent another important implication of the study. All of the individuals who did not submit goals were physician MBA students. Moreover, the mean goal quality and feedback-goal correspondence score was lower for physician MBA students than for engineer and senior-level executive MBA students. There are a number of reasons why physicians may have been less likely to submit goals than other participants. First, engineers and senior-level executives may associate developing soft skills with career advancement; physicians may see developing soft skills as less relevant to career advancement than developing hard, technical skills associated with medicine. Thus, physicians may perceive less benefit associated with the program. Second, the multisource feedback appraisals may seem less important to physicians than to other groups. That is, senior level executives and engineers tend to have subordinates and superiors that share their career discipline; many of the physicians enrolled in MBA programs work in private practices where they have peers who share their career discipline, but not subordinates or superiors. Specifically, physicians are often managed by a board of community representatives, or by individuals with degrees in hospital administration rather than medicine. Their subordinates are more frequently nurses and administrative assistants rather than physicians. As a result, the superior and subordinate feedback may not carry the same weight as it would if it came from other physicians. This is problematic, as some research suggests that subordinate feedback appears to be especially important in leader development feedback, as it is most valued by managers (Brutus, London, & Martineau, 1999). Third, many of the faculty who

served as leader development coaches had also worked as corporate executives, and a few had a background in engineering; none, however, were physicians. It could be that the coaches were not seen as credible mentors to the Physician MBA students, as they were from a different career discipline.

In any case, the results imply that leader development programs may need to be geared to specifically fit the nature of the career discipline associated with the program. For instance, in order to create better leader development programs for physician participants, 1) the feedback topics may need to be tied more closely to technical skills or reframed to focus more on patient-related dimensions rather than organizationally-related dimensions, 2) the sources used in multisource feedback should include peer physicians, executive administrative staff, office administrative assistants, and nurses, and 3) coaches should have a medical background. Tailoring the programs to target the specific characteristics of the participants may increase the effectiveness of the programs. Nevertheless, these recommendations should be implemented with caution, as the differences among the three groups could be due to some factor specific to the particular Physician MBA program.

The negative relationship between narcissism and feedback-goal correspondence offers another important implication of this study. Recent research has focused on the problems associated with the narcissistic personality in the workplace. This study contributes to that body of research as the findings indicate that narcissistic individuals are also less likely to respond to leader development feedback. This is especially problematic as leader development programs are often used as a tool to address performance deficiencies associated with narcissism (Howell & Avolio, 1992). It is

pertinent that practitioners be made aware of the tendency of narcissistic individuals to ignore the feedback that they receive. Control mechanisms should be established to monitor the progress of narcissistic people while participating in leader development. Understanding this relationship will help to ensure that leader development programs are effective tools for addressing narcissistic tendencies.

Past research and theory indicate that CSE and the goal orientation dimensions should have been related to goal quality and feedback-goal correspondence (London & Smither, 2002; Maurer, Mitchell, & Barbeite, 2002; Maurer & Tarulli, 1994). The failure to find significant results regarding these relationships represents another important implication of this study. The results of this study do not necessarily contradict past research, but rather suggest that the dispositional variables predict some leader development outcomes but not others. That is, CSE and the goal orientation dimensions may serve as valid predictors of factors related to the initial choice to participate, including 1) attitudes towards leader development, 2) the number of developmental activities in which the individual reports to have participated, and 3) the initial choice to participate in developmental activities. However, based on the results of this study, CSE and the goal orientation dimensions may be less valid predictors of the behaviors of individuals after they are entered in the program, including 1) the quality of goals submitted during participation, and 2) attention to leader development feedback. Failure to support the notion that CSE and LGO predict behavioral outcomes of participation in leader development has implications for practitioners and researchers: the factors that predict an individual's choice to participate may not also predict the quality of the individual's performance once enrolled in the program. However, if CSE and goal

orientation do not predict leader development outcomes, what factors do predict these outcomes?

The control variables were included in this study because they represented factors that have been related to similar constructs in other literatures. However, the importance of these factors in leader development has not specifically been explored in previous research. The observation that several of the control variables are related to feedback-goal correspondence and goal quality makes another important contribution to the leader development literature. For instance, critical thinking ability was related to both goal quality and feedback-goal correspondence, especially when gender and profession were partialled from the correlations. As critical thinking ability is a byproduct of intelligence, this finding is not surprising. Indeed, multiple studies have demonstrated the importance of intelligence in predicting training outcomes (Ceci & Papierno, 2005; Day, Arthur, Bell, Edwards, Bennett, et al., 2004; Devine & Philips, 2001; Kanfer & Ackerman, 1989). Specifically, Ceci and Papierno (2005) examined the importance of intelligence in predicting the success of different types of behavioral interventions, including drug, mental health, and learning interventions. They concluded that in each type of intervention, intelligent people benefit more than less intelligent people. It makes sense that when individuals are given feedback regarding their leadership attributes, intelligence is related to actual use of the feedback and the formation of high quality goals. Thus, leader development programs may be seen as another type of behavioral intervention in which intelligent people benefit more than less intelligent people. Other potential factors that may be used to explain individual differences in experienced benefits of leader development appear negligible in comparison to the effect of

intelligence. The importance of intelligence in predicting leader development outcomes should be examined in future research.

The number of hours spent in training and development was another control variable that was related to the study outcomes. Specifically, hours spent in training and development was not only related to goal quality, but was also related to whether the individual did or did not submit leader development goals. What is problematic is that the etiology of the number of hours each individual has spent in training and development is unclear. That is, the number of hours spent in training and development could be related to: 1) past training programs sanctioned by the individual's organization, or 2) each individual's own choice to engage in developmental opportunities. If the latter is true, then there must be some individual difference variable related to the affinity to seek and engage in developmental opportunities. If the former is true, then it appears as though organizational level factors could influence the individual's perception of the importance of developmental experiences, as the quality of the developmental goals were not monitored by representatives from each individual's organization. At any rate, the number of hours spent in training and development was related to goal quality in this study, and the reasons for this relationship should be examined further in future research.

In conclusion, this study makes several important contributions to the literature. Specifically, it clarified the relationship between CSE and the goal orientation dimensions, and it clarified the relationship between narcissism and the goal orientation dimensions. Furthermore, although the hypotheses regarding he dispositional antecedents of goal quality and feedback-goal correspondence were generally not supported, several important points were made regarding these variables. First, the dispositional factors that

predict the choice to participate in leader development do not also predict the behavior of participants. Second, goal quality and feedback-goal correspondence are not redundant constructs, and evidence suggests that about half of the goals submitted by participants relate to the feedback they were given. Theses results suggest that behaviors displayed during the course of leader development are viable criteria for understanding the factors related to successful participation in leader development programs. Third, narcissism is related to the amount of attention given to feedback. Fifth, intelligence predicts both goal quality and feedback-goal correspondence. In all, this study is important for researchers and practitioners interested in studying and designing leader development programs.

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APPENDIXES

APPENDIX A

An Abbreviated Version of the Leader Development Goal Instruction Packet

Leadership Development Program Guidelines: Integrating Your Feedback and Drafting a Leadership Development Plan

You have just received a notebook full of information about you and your management/leadership style. The information presented in this document is provided to help you interpret and understand the potentially overwhelming amount of information that you have received. Please take some time to look over our suggestions and then dive into the feedback.

We will be having a distance learning session on April 8th review the California Psychological Inventory and Watson-Glaser Critical Thinking Appraisal results in more detail, as well as to review the next steps in the LDP process. We will also be meeting with you one-on-one during RP2 to discuss your feedback, but if you have any pressing questions as you are perusing your feedback please feel free to contact us.

How to Interpret Co-worker Ratings from the Bar Graphs

One of the most important things to note about the bar graph for each competency is how your self-ratings compare to the ratings provided by your various groups of Co-workers. You shouldn't necessarily expect your ratings to agree with their perceptions of your behavior. According to the nature of your interactions with each person, or your responsibilities to them, you may show different behaviors, or there may be differences in how consistently you show a particular behavior to each person.

- Make notes concerning areas of disagreement between you, your peers, your manager, and your employees. **Note:** An "area of disagreement" will typically be points on the graph that differ one unit or more from each other. For example, if the two bars on the Delegation scale are at 4.00 and 3.00, you may want to think about examining this difference in perception. However, if the two bars are at 4.00 and 3.60, the difference in perception is most likely insignificant.

- Make notes concerning the general level of the bars on the graph. For example, is the level of Delegation where you want it? Should it be higher or lower?

Read the Open-Ended Comments

These [comments] consist of the written comments provided by your Co-workers on the 360-degree survey. Specifically, they were asked to identify: 1) your greatest strengths, 2) your greatest areas for improvement, 3) your mission and goals for the work group, and 4) any other comments they felt were pertinent but were not covered by the survey.

The objective is to identify, based on all of your feedback, issues to address in your developmental action plan in the upcoming year. Specifically, the goal is to identify strengths you can leverage to your advantage, as well as development areas to address to improve your effectiveness.

The next section will help you to narrow down your focus so that you can formulate a useful development plan.

Integrating Your Feedback

Attempt to integrate all of your feedback to get an accurate picture of your performance. Are there trends in the data? Do certain strengths or weaknesses keep getting mentioned in your feedback? Make a list of your strengths and weaknesses as a leader, based on the integration of your feedback.

Narrowing Down

Considering your past performance and other feedback you may have received, which skills do you recognize as most in need of improvement? **Decide on 4 to 6 areas that are most in need of improvement. List them in the box below.**

Because your development plan will focus on only 3 – 4 areas for improvement, you need to narrow the list further. We will do so by evaluating your current list against the following criteria. **In choosing areas for your development plan, focus on those skill areas that:**

- **You believe you can change or <u>improve</u>.** Some will be easier to change than others. Focus on the areas that you can realistically improve over the next 9 to 12 months.
- **Have <u>resources</u> available to support the change.** It may be easier to find a class, seminar, book, or mentor to support your change efforts for one area, compared with another.
- **Are <u>important to your continued success</u>**. Some performance deficiencies carry more of a penalty than others in terms of holding you back from achieving your career goals. Target the ones that are most likely to hold you back if they aren't improved.

Weigh each skill area against the criteria using the checklist below.

Suggestions for categorization include:

⇒High Medium Low
⇒ + 0 —
⇒ A B C
⇒or any other scheme that makes sense to you.

List your 4 to 6 areas most in need of improvement:	**Ability to Improve**	**Resource Availability**	**Career Importance**
1			
2			
3			
4			
5			
6			

Creating Your Development Plan

Sample Development Plan

A Development Plan is comprised of several development goals. Each goal lists: steps to be taken to achieve the goal, deadlines for completing each step, and resources to draw upon.

Development Plan for Esther D. Potter
Created March, 2006

Goal #1: Develop a strategic plan for the department. **Deadline for Goal Completion**: June 15

Steps to take to achieve this goal:

A. Review workshop materials on developing a strategic plan. Deadline: March 10
   Available Resources: Training manual, instructor, peers that attended training.
B. Review department performance for the last 3 years. Identify areas of low performance and strengths to build upon. Deadline: February 15.
   Available resources: Financial records; previous manager.
C. Benchmark innovative practices that are effective in other comparable departments.
   Contact no fewer than 4 departments; visit no fewer than three departments to identify innovative strategies. Deadline: April 8.
   Available resources: Peers; District Manager.
D. Meet with DM to review and finalize the plan. Deadline: June 1.

Available resources: DM.

Strengths I can leverage to improve my progress toward this goal: Analytical Thinking.

How I will monitor these goals: Personal computer tracking system.

Reward for achieving this goal: Team event unveiling the new plan; have DM attend.

Now you have all the basics to get started on your development plan. Here's what you need to do:

- Choose one area related to developing yourself.
- Choose one are related to developing employees.
- Choose one *personal* area for improvement – that is, an area focused on personal well-being, work/family balance, self-actualization, etc. Suggestions may include:
  - Carving out a *regular* time for your spouse, children, family or friends
  - Spending more *quality* time with your spouse, children, family or friends
  - Committing to a regular exercise routine
  - Eating healthier
  - Getting more involved in your community/volunteer work
  - Taking piano lessons
- Choose one "wild card" goal – it can be in any of the 3 areas mentioned above.

NOTE: We can help you with ideas, resources, etc. The goal is to sketch out a draft of what you think you would like to accomplish this year.

Development Plan for:

Created:

Developing Oneself: _____

Deadline for Goal completion: _____

Steps to achieve this goal:

A) _____

_____

Deadline: _____

Available resources:_____

B) _____

_____

Deadline: _____

Available resources:_____

C) _____

_____

Deadline: _____

Available resources:_____

D) _____

_____

Deadline: _____

Available resources:_____

Strengths I can leverage to improve my progress toward this goal: _____

How I will monitor these goals: _____

Reward for achieving this goal: _____

*How I will know when I've achieved this goal:*_____

Development Plan for:

Created:

Developing Others: _____

Deadline for Goal completion: _____

Steps to achieve this goal:

A) _____

_____

Deadline: _____

Available resources:_____

B) _____

_____

Deadline: _____

Available resources:_____

C) _____

_____

Deadline: _____

Available resources:_____

D) _____

_____

Deadline: _____

Available resources:_____

Strengths I can leverage to improve my progress toward this goal: _____

How I will monitor these goals: _____

Reward for achieving this goal: _____

*How I will know when I've achieved this goal:*_____

Development Plan for:

Created:

Personal Area for Improvement: _____

Deadline for Goal completion: _____

Steps to achieve this goal:

A) _____

_____

Deadline: _____

Available resources:_____

B) _____

_____

Deadline: _____

Available resources:_____

C) _____

_____

Deadline: _____

Available resources:_____

D) _____

_____

Deadline: _____

Available resources:_____

Strengths I can leverage to improve my progress toward this goal: _____

How I will monitor these goals: _____

Reward for achieving this goal: _____

*How I will know when I've achieved this goal:*_____

Development Plan for:

Created:

Wild Card Goal: _____

Deadline for Goal completion: _____

Steps to achieve this goal:

A) _____

_____

Deadline: _____

Available resources:_____

B) _____

_____

Deadline: _____

Available resources:_____

C) _____

_____

Deadline: _____

Available resources:_____

D) _____

_____

Deadline: _____

Available resources:_____

Strengths I can leverage to improve my progress toward this goal: _____

How I will monitor these goals: _____

Reward for achieving this goal: _____

How I will know when I've achieved this goal:_____

APPENDIX B

Additional Tables Presenting Hypotheses Tests based on the Sample Controlling for Gender and Profession

Table B 1

CSE and Control Variables Predicting Goal Quality (N = 65)

	DV: Goal Quality					
Variables	B	*SE B*	*β*	*r*	*Partial r*	*Part r*
Step 1						
Gender	.42	.25	.19	-.01	.21	.18
Career Discipline	-.57	.11	-.58*	-.52	-.55	-.55
Step 2						
Gender	.46	.26	.20	-.01	.23	.18
Career Discipline	-.55	.12	-.57*	-.52	-.53	-.49
Critical Thinking	.02	.01	.18	.14	.21	.17
Responsibility	.02	.02	.08	.13	.10	.08
Past Feedback	-.02	.08	-.03	.08	-.04	-.03
Workshops	.02	.05	.05	.04	.06	.05
Hours in T&D	.00	.00	.17	.35	.17	.14
Step 3						
Gender	.46	.27	.20	-.01	.23	.18
Career Discipline	-.56	.12	-.57	-.52	-.53	-.49
Critical Thinking	.02	.01	.18	.14	.21	.17
Responsibility	.02	.02	.08	.13	.10	.08
Past Feedback	-.02	.08	-.03	.08	-.03	-.02
Workshops	.02	.05	.06	.04	.06	.05
Hours in T&D	.00	.00	.17	.35	.17	.14
CSE	-.02	.23	-.01	.17	-.01	-.01

Note. R^2 = .30 for Step 1; ΔR^2 = .09 for Step 2 (p = ns). ΔR^2 = .00 for Step 3 (p = ns). CSE = Core Self-Evaluation. Observed statistical power (α = .05) = .87 to find a significant change in R^2 based on a medium effect size (η = .15). $^*p < .05$.

Table B 2

Narcissism and Control Variables Predicting Feedback-Goal Correspondence (N = 68)

	DV: Feedback-Goal Correspondence					
Variables	B	*SE B*	*B*	*r*	*Partial r*	*Part r*
Step 1						
Gender	.10	.07	.18	.14	.17	.17
Career Discipline	-.03	.03	-.11	-.06	-.11	-.11
Step 2						
Gender	.12	.08	.21	.14	.19	.19
Career Discipline	-.04	.04	-.15	-.06	-.13	-.13
Critical Thinking	.00	.00	.16	.16	.15	.15
Responsibility	.01	.01	.16	.11	.16	.15
Past Feedback	.00	.02	.01	.02	.01	.01
Workshops	.00	.01	.00	-.05	.00	.00
Hours in T&D	.00	.00	-.10	-.02	-.08	-.08
Step 3						
Gender	.12	.08	.21	.14	.20	.19
Career Discipline	-.04	.04	-.14	-.06	-.13	-.12
Critical Thinking	.00	.00	.15	.16	.14	.14
Responsibility	.01	.01	.11	.11	.09	.09
Past Feedback	.00	.02	.02	.02	.02	.01
Workshops	.00	.02	.01	-.05	.01	.01
Hours in T&D	.00	.00	-.10	-.02	-.08	-.08
Narcissism	.00	.01	-.10	-.14	-.08	-.08

Note. R^2 = .03 for Step 1; ΔR^2 = .05 for Step 2 (p = ns). ΔR^2 = .01 for Step 3 (p = ns). Observed statistical power (α = .05) = .88 to find a significant change in R^2 based on a medium effect size (η = .15). $^*p < .05$.

Table B 3

LGO and Control Variables Predicting Goal Quality (N = 65)

	DV: Goal Quality					
Variables	B	*SE B*	*B*	*r*	*Partial r*	*Part r*
Step 1						
Gender	.42	.25	.19	-.01	.21	.18
Career Discipline	-.57	.11	-.58*	-.52	-.55	-.55
Step 2						
Gender	.46	.26	.20	-.01	.23	.18
Career Discipline	-.55	.12	-.57*	-.52	-.53	-.49
Critical Thinking	.02	.01	.18	.14	.21	.17
Responsibility	.02	.02	.08	.13	.10	.08
Past Feedback	-.02	.08	-.03	.08	-.04	-.03
Workshops	.02	.05	.05	.04	.06	.05
Hours in T&D	.00	.00	.17	.35	.17	.14
Step 3						
Gender	.46	.27	.20	-.01	.22	.18
Career Discipline	-.55	.12	-.57*	-.52	-.53	-.49
Critical Thinking	.02	.01	.18	.14	.21	.16
Responsibility	.02	.02	.08	.13	.10	.08
Past Feedback	-.02	.08	-.03	.08	-.04	-.03
Workshops	.02	.05	.05	.04	.06	.04
Hours in T&D	.00	.00	.17	.35	.17	.14
CSE	.01	.19	.01	.07	.01	.01

Note. R^2 = .30 for Step 1; ΔR^2 = .09 for Step 2 (p = ns). ΔR^2 = .00 for Step 3 (p = ns). LGO = Learning Goal Orientation. Observed statistical power (α = .05) = .87 to find a significant change in R^2 based on a medium effect size (η = .15). $^*p < .05$.

Table B 4

LGO and Control Variables Predicting Feedback-Goal Correspondence (N = 65)

	DV: Feedback-Goal Correspondence					
Variables	B	*SE B*	*B*	*r*	*Partial r*	*Part r*
Step 1						
Gender	.09	.08	.15	.12	.14	.14
Career Discipline	-.02	.03	-.08	-.03	-.07	-.07
Step 2						
Gender	.10	.08	.18	.12	.16	.16
Career Discipline	-.03	.04	-.12	-.03	-.10	-.10
Critical Thinking	.00	.00	.16	.16	.16	.15
Responsibility	.01	.01	.15	.11	.14	.14
Past Feedback	.00	.03	.01	.02	.01	.01
Workshops	.00	.02	-.01	-.06	-.01	-.01
Hours in T&D	.00	.00	-.10	-.05	-.09	-.08
Step 3						
Gender	.11	.09	.19	.12	.17	.17
Career Discipline	-.03	.04	-.12	-.03	-.10	-.10
Critical Thinking	.01	.00	.17	.16	.17	.16
Responsibility	.01	.01	.15	.11	.14	.14
Past Feedback	.00	.03	.02	.02	.02	.02
Workshops	.00	.02	.00	-.06	.00	.00
Hours in T&D	.00	.00	-.10	-.05	-.08	-.08
LGO	-.03	.06	-.07	-.02	-.07	-.07

Note. R^2 = .02 for Step 1; ΔR^2 = .05 for Step 2 (p = ns). ΔR^2 = .01 for Step 3 (p = ns). LGO = Learning Goal Orientation. Observed statistical power (α = .05) = .87 to find a significant change in R^2 based on a medium effect size (η = .15). $^*p < .05$.

Table B 5

PPGO and Control Variables Predicting Goal Quality (N = 65)

	DV: Goal Quality					
Variables	B	*SE B*	*B*	*r*	*Partial r*	*Part r*
Step 1						
Gender	.42	.25	.19	-.01	.21	.18
Career Discipline	-.57	.11	-.58*	-.52	-.55	-.55
Step 2						
Gender	.46	.26	.20	-.01	.23	.18
Career Discipline	-.55	.12	-.57*	-.52	-.53	-.49
Critical Thinking	.02	.01	.18	.14	.21	.17
Responsibility	.02	.02	.08	.13	.10	.08
Past Feedback	-.02	.08	-.03	.08	-.04	-.03
Workshops	.02	.05	.05	.04	.06	.05
Hours in T&D	.00	.00	.17	.35	.17	.14
Step 3						
Gender	.45	.26	.20	-.01	.22	.18
Career Discipline	-.58	.12	-.59*	-.52	-.54	-.49
Critical Thinking	.02	.01	.19	.14	.22	.18
Responsibility	.02	.02	.09	.13	.11	.09
Past Feedback	-.03	.08	-.04	.08	-.04	-.03
Workshops	.03	.05	.07	.04	.07	.06
Hours in T&D	.00	.00	.15	.35	.16	.12
PPGO	.10	.13	.09	-.02	.11	.08

Note. R^2 = .30 for Step 1; ΔR^2 = .09 for Step 2 (p = ns). ΔR^2 = .01 for Step 3 (p = ns). PPGO = Performance –Prove Goal Orientation. Observed statistical power (α = .05) = .87 to find a significant change in R^2 based on a medium effect size (η = .15). $^*p < .05$.

Table B 6

PPGO and Control Variables Predicting Feedback-Goal Correspondence (N = 65)

	DV: Feedback-Goal Correspondence					
Variables	B	*SE B*	*B*	*r*	*Partial r*	*Part r*
Step 1						
Gender	.09	.08	.15	.12	.14	.14
Career Discipline	-.02	.03	-.08	-.03	-.07	-.07
Step 2						
Gender	.10	.08	.18	.12	.16	.16
Career Discipline	-.03	.04	-.12	-.03	-.10	-.10
Critical Thinking	.00	.00	.16	.16	.16	.15
Responsibility	.01	.01	.15	.11	.14	.14
Past Feedback	.00	.03	.01	.02	.01	.01
Workshops	.00	.02	-.01	-.06	-.01	-.01
Hours in T&D	.00	.00	-.10	-.05	-.09	-.08
Step 3						
Gender	.11	.08	.18	.12	.17	.16
Career Discipline	-.03	.04	-.11	-.03	-.09	-.09
Critical Thinking	.00	.00	.16	.16	.15	.15
Responsibility	.01	.01	.14	.11	.14	.13
Past Feedback	.00	.03	.01	.02	.01	.01
Workshops	.00	.02	-.02	-.06	-.02	-.02
Hours in T&D	.00	.00	-.10	-.05	-.08	-.08
PPGO	-.01	.04	-.04	-.07	-.04	-.04

Note. R^2 = .02 for Step 1; ΔR^2 = .05 for Step 2 (p = ns). ΔR^2 = .00 for Step 3 (p = ns). PPGO = Performance –Prove Goal Orientation. Observed statistical power (α = .05) = .87 to find a significant change in R^2 based on a medium effect size (η = .15). $^*p < .05$.

Table B 7
PAGO and Control Variables Predicting Goal Quality (N = 65)

	DV: Goal Quality					
Variables	B	*SE B*	*B*	*r*	*Partial r*	*Part r*
Step 1						
Gender	.42	.25	.19	-.01	.21	.18
Career Discipline	-.57	.11	-.58*	-.52	-.55	-.55
Step 2						
Gender	.46	.26	.20	-.01	.23	.18
Career Discipline	-.55	.12	-.57*	-.52	-.53	-.49
Critical Thinking	.02	.01	.18	.14	.21	.17
Responsibility	.02	.02	.08	.13	.10	.08
Past Feedback	-.02	.08	-.03	.08	-.04	-.03
Workshops	.02	.05	.05	.04	.06	.05
Hours in T&D	.00	.00	.17	.35	.17	.14
Step 3						
Gender	.51	.27	.23	-.01	.25	.20
Career Discipline	-.59	.12	-.60*	-.52	-.54	-.49
Critical Thinking	.02	.01	.17	.14	.21	.16
Responsibility	.02	.02	.11	.13	.13	.10
Past Feedback	-.01	.08	-.01	.08	-.01	-.01
Workshops	.02	.05	.06	.04	.06	.05
Hours in T&D	.00	.00	.17	.35	.17	.13
PAGO	.10	.11	.10	-.11	.12	.09

Note. R^2 = .30 for Step 1; ΔR^2 = .09 for Step 2 (p = ns). ΔR^2 = .01 for Step 3 (p = ns). PAGO = Performance-Avoid Goal OrientationObserved statistical power (α = .05) = .87 to find a significant change in R^2 based on a medium effect size (η = .15). $^*p < .05$.

Table B 8

PAGO and Control Variables Predicting Feedback-Goal Correspondence (N = 65)

	DV: Feedback-Goal Correspondence					
Variables	B	*SE B*	*β*	*r*	*Partial r*	*Part r*
Step 1						
Gender	.09	.08	.15	.12	.14	.14
Career Discipline	-.02	.03	-.08	-.03	-.07	-.07
Step 2						
Gender	.10	.08	.18	.12	.16	.16
Career Discipline	-.03	.04	-.12	-.03	-.10	-.10
Critical Thinking	.00	.00	.16	.16	.16	.15
Responsibility	.01	.01	.15	.11	.14	.14
Past Feedback	.00	.03	.01	.02	.01	.01
Workshops	.00	.02	-.01	-.06	-.01	-.01
Hours in T&D	.00	.00	-.10	-.05	-.09	-.08
Step 3						
Gender	.09	.09	.15	.12	.14	.13
Career Discipline	-.02	.04	-.08	-.03	-.07	-.07
Critical Thinking	.01	.00	.16	.16	.16	.16
Responsibility	.01	.01	.12	.11	.11	.11
Past Feedback	.00	.03	-.01	.02	-.01	-.01
Workshops	.00	.02	-.02	-.06	-.02	-.01
Hours in T&D	.00	.00	-.10	-.05	-.08	-.08
PAGO	-.03	.04	-.11	-.15	-.10	-.10

Note. R^2 = .02 for Step 1; ΔR^2 = .05 for Step 2 (p = ns). ΔR^2 = .01 for Step 3 (p = ns). PAGO = Performance-Avoid Goal Orientation. Observed statistical power (α = .05) = .87 to find a significant change in R^2 based on a medium effect size (η = .15). $^*p < .05$.

Table B 9
CSE and Control Variables Predicting LGO (N = 89)

	DV: LGO					
Variables	B	*SE B*	*β*	*r*	*Partial r*	*Part r*
Step 1						
Gender	.10	.14	.08	.12	.08	.08
Career Discipline	.12	.06	.22*	.23	.21	.21
Step 2						
Gender	.09	.14	.07	.12	.07	.07
Career Discipline	.11	.06	.20	.23	.20	.19
Critical Thinking	.01	.01	.18	.22	.18	.18
Responsibility	.01	.01	.05	.04	.05	.05
Step 3						
Gender	.06	.14	.04	.12	.05	.04
Career Discipline	.11	.06	.20	.23	.21	.19
Critical Thinking	.01	.01	.23*	.22	.24	.22
Responsibility	.00	.01	-.03	.04	-.03	-.03
CSE	.33	.11	.30*	.26	.30	.28

Note. R^2 = .06 for Step 1; ΔR^2 = .04 for Step 2 (p = ns). ΔR^2 = .08 for Step 3 ($p < .05$). CSE = Core Self-Evaluation. LGO = Learning Goal Orientation. Observed statistical power (α = .05) = .95 to find a significant change in R^2 based on a medium effect size (η = .15). $^*p < .05$.

Table B 10
CSE and Control Variables Predicting PPGO (N = 89)

	DV: PPGO					
Variables	B	*SE B*	*β*	*r*	*Partial r*	*Part r*
Step 1						
Gender	.07	.20	.04	.07	.04	.04
Career Discipline	.14	.09	.17	.17	.16	.16
Step 2						
Gender	.03	.20	.01	.07	.01	.01
Career Discipline	.13	.09	.17	.17	.16	.16
Critical Thinking	-.01	.01	-.07	-.06	-.07	-.06
Responsibility	-.03	.02	-.16	-.19	-.16	-.16
Step 3						
Gender	.08	.20	.04	.07	.04	.04
Career Discipline	.14	.09	.17	.17	.17	.16
Critical Thinking	-.01	.01	-.11	-.06	-.12	-.11
Responsibility	-.01	.02	-.08	-.19	-.08	-.07
CSE	-.47	.16	-.30*	-.31	-.30	-.29

Note. R^2 = .03 for Step 1; ΔR^2 = .03 for Step 2 (p = ns). ΔR^2 = .08 for Step 3 ($p < .05$). CSE = Core Self-Evaluation. PPGO = Performance-Prove Goal Orientation. Observed statistical power (α = .05) = .95 to find a significant change in R^2 based on a medium effect size (η = .15). $^*p < .05$.

Table B 11
CSE and Control Variables Predicting PAGO (N = 89)

	DV: PAGO					
Variables	B	*SE B*	*β*	*r*	*Partial r*	*Part r*
Step 1						
Gender	-.19	.24	-.09	-.04	-.09	-.08
Career Discipline	.21	.11	.21	.19	.20	.20
Step 2						
Gender	-.34	.24	-.15	-.04	-.15	-.14
Career Discipline	.18	.10	.18	.19	.18	.17
Critical Thinking	.01	.01	.10	.07	.10	.09
Responsibility	-.07	.02	-.33*	-.30	-.32	-.32
Step 3						
Gender	-.23	.20	-.10	-.04	-.12	-.10
Career Discipline	.18	.09	.18*	.19	.21	.17
Critical Thinking	.00	.01	.02	.07	.02	.02
Responsibility	-.04	.02	-.19*	-.30	-.21	-.17
CSE	-.93	.17	-.50*	-.55	-.51	-.47

Note. R^2 = .04 for Step 1; ΔR^2 = .10 for Step 2 ($p < .05$). ΔR^2 = .22 for Step 3 ($p < .05$). CSE = Core Self-Evaluation. PAGO = Performance-Avoid Goal Orientation. Observed statistical power ($\alpha = .05$) = .95 to find a significant change in R^2 based on a medium effect size ($\eta = .15$). $^*p < .05$.

Table B 12
Narcissism and Control Variables Predicting LGO (N = 89)

	DV: LGO					
Variables	B	*SE B*	*β*	*r*	*Partial r*	*Part r*
Step 1						
Gender	.10	.14	.08	.12	.08	.08
Career Discipline	.12	.06	.22*	.23	.21	.21
Step 2						
Gender	.09	.14	.07	.12	.07	.07
Career Discipline	.11	.06	.20	.23	.20	.19
Critical Thinking	.01	.01	.18	.22	.18	.18
Responsibility	.01	.01	.05	.04	.05	.05
Step 3						
Gender	.02	.13	.02	.12	.02	.02
Career Discipline	.09	.06	.16	.23	.17	.16
Critical Thinking	.02	.01	.25*	.22	.26	.24
Responsibility	.03	.01	.23*	.04	.22	.20
Narcissism	.03	.01	.40*	.26	.35	.33

Note. R^2 = .06 for Step 1; ΔR^2 = .04 for Step 2 (p = ns). ΔR^2 = .11 for Step 3 ($p < .05$). LGO = Learning Goal Orientation. LGO = Learning Goal Orientation. Observed statistical power (α = .05) = .95 to find a significant change in R^2 based on a medium effect size (η = .15). $^*p < .05$.

Table B 13

Narcissism and Control Variables Predicting PPGO (N = 89)

	DV: PPGO					
Variables	B	*SE B*	*β*	*r*	*Partial r*	*Part r*
Step 1						
Gender	.07	.20	.04	.07	.04	.04
Career Discipline	.14	.09	.17	.17	.16	.16
Step 2						
Gender	.03	.20	.01	.07	.01	.01
Career Discipline	.13	.09	.17	.17	.16	.16
Critical Thinking	-.01	.01	-.07	-.06	-.07	-.06
Responsibility	-.03	.02	-.16	-.19	-.16	-.16
Step 3						
Gender	-.09	.19	-.05	.07	-.05	-.05
Career Discipline	.10	.08	.12	.17	.13	.12
Critical Thinking	.00	.01	.01	-.06	.01	.01
Responsibility	.01	.02	.04	-.19	.04	.04
Narcissism	.05	.01	.46*	.44	.40	.38

Note. R^2 = .03 for Step 1; ΔR^2 = .03 for Step 2 (p = ns). ΔR^2 = .15 for Step 3 ($p < .05$). CSE = Core Self-Evaluation. PPGO = Performance-Prove Goal Orientation. Observed statistical power (α = .05) = .95 to find a significant change in R^2 based on a medium effect size (η = .15). $^*p < .05$.

Table B 14

Narcissism and Control Variables Predicting PAGO (N = 89)

	DV: PAGO					
Variables	B	*SE B*	*β*	*r*	*Partial r*	*Part r*
Step 1						
Gender	-.19	.24	-.09	-.04	-.09	-.08
Career Discipline	.21	.11	.21	.19	.20	.20
Step 2						
Gender	-.34	.24	-.15	-.04	-.15	-.14
Career Discipline	.18	.10	.18	.19	.18	.17
Critical Thinking	.01	.01	.10	.07	.10	.09
Responsibility	-.07	.02	-.33*	-.30	-.32	-.32
Step 3						
Gender	-.40	.24	-.18	-.04	-.18	-.17
Career Discipline	.16	.10	.16	.19	.17	.15
Critical Thinking	.01	.01	.13	.07	.14	.13
Responsibility	-.05	.02	-.23*	-.30	-.21	-.20
Narcissism	.03	.02	.21	.28	.19	.18

Note. R^2 = .04 for Step 1; ΔR^2 = .10 for Step 2 ($p < .05$). ΔR^2 = .13 for Step 3 (p = ns). CSE = Core Self-Evaluation. PAGO = Performance-Avoid Goal Orientation. Observed statistical power ($\alpha = .05$) = .95 to find a significant change in R^2 based on a medium effect size ($\eta = .15$). $^*p < .05$.

VITA

Carrie Blair grew up in Flat Gap, Kentucky where she graduated from Johnson Central High School. In 2001, she graduated Magna Cum Laude with a Bachelors of Art degree in Psychology and minors in Communication and Religion from Georgetown College in Georgetown, Kentucky. Later, she attended an Industrial/Organizational Psychology Masters Program at East Carolina University. During her tenure at ECU, she completed a research internship at the Naval Research Lab in Washington, DC, and she completed an applied internship with Manpower, Inc. in Greenville, North Carolina. She received her Masters degree from ECU in 2003.

She immediately began working on her doctoral degree in Industrial and Organizational Psychology at the University of Tennessee – Knoxville. While completing her doctoral degree, Carrie also served as the staff coordinator for Tennessee Assessment Center and as a member of the coordinating team for the Executive Education Leader Development Program. She completed her doctoral degree in Industrial/Organizational Psychology in 2008.

Carrie's research has been published in Basic and Applied Social Psychology, Journal of Applied Psychology, and Human Performance. She has presented her work at the Annual Meeting of the Academy of Management, the Annual Meeting of the Southern Management Association, the Association for Psychological Science convention, and the Society of Industrial/Organizational Psychologists convention. She is an Assistant Professor of Management and Entrepreneurship at the College of Charleston in Charleston, South Carolina.