

Testing the Generality of Regulatory Fit with Goal Orientation in the  
Performance Feedback Context

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ABSTRACT

Regulatory fit (Higgins 2000) has, thus far, only been tested using regulatory focus theory (Cesario, Higgins, & Scholer, 2008); this study contributes to the current literature by testing the generality of the fit principle using goal orientation. I will test the effect of fit on corrective feedback utilization. I predict that experiencing regulatory fit between goal orientation and goal pursuit strategies will lead to: 1) higher behavioral utilization of feedback, and 2) feedback recall. Self-monitoring will be included as an exploratory variable to assess whether level of self-monitoring will affect the aforementioned outcomes. Results indicated that individuals experiencing regulatory fit between goal orientation and feedback framing exhibited greater variety and frequency of feedback recommended behaviors overall. No fit effects were found for feedback recall. Self-monitoring was not impacted by goal orientation or feedback framing.

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## Introduction

Self-regulation, the "processes involved in attaining and maintaining goals, where goals are internally represented desired states," has been a topic of interest to organizational researchers (Vancouver & Day, 2005). Self-regulation processes have been studied in the context of goals, feedback, goal-performance discrepancy, expectancy, etc. A prominent theory of self-regulation, regulatory fit theory, asserts that if individuals achieve congruence between regulatory orientation and the means employed to achieve goals, they will experience increased engagement, increased sense of value toward a goal, and greater behavior change (Higgins 2005). This study tests regulatory fit theory in the context of utilization of corrective, veridical feedback.

### *Feedback Utilization*

The act of performing a task often provides success or failure feedback to the person doing the task (Goodman, 1998). However, for many tasks, diagnostic information about successes and failures is ambiguous and/or improving task outcomes requires corrective task feedback from an external source knowledgeable of the task. The current literature on external feedback shows variability regarding the assumption that feedback intervention leads to better performance (e.g., Cianci, Shaubroeck, & McGill, 2010). In a meta-analysis, Kluger and DeNisi (1996) found that approximately one-third of studies conducted on feedback interventions report that feedback has no effect or a negative effect on performance.

Researchers (e.g., Deci & Ryan, 1985; Ashford & Cummings, 1983; Ilgen, Fisher, & Taylor, 1979) have studied feedback utilization using person, situation, and person x situation antecedent variables. Using these antecedents has provided insight into feedback utilization but has not allowed researchers to fully capture the dynamic nature of feedback utilization. I argue

that regulatory fit theory may provide a more generalized framework from which to better understand utilization of corrective feedback. Regulatory fit is a theory of self-regulation (Higgins, 2000, 2007) that has clear implications for studying feedback utilization. Although it has almost exclusively been studied with regulatory focus theory, the principle of regulatory fit can be used with any regulatory orientation variable (Cesario, Higgins, & Scholer, 2008). Currently, goal orientation, a theory of achievement motivation, is the dominant regulatory orientation variable in organizational science research (e.g., VandeWalle, Brown, Cron, & Slocum, 1999). Therefore, the current study is the first to study feedback utilization as a function of regulatory fit when using goal orientation as the regulatory orientation variable.

### *Regulatory Fit*

Regulatory fit, a theory of self-regulation, posits that individuals have different means of pursuing goals (Higgins 2000). Two individuals may share a common goal but have differing regulatory orientations leading each individual to take a different path in achieving the same goal. To achieve regulatory fit, the goal pursuit strategy, or the means employed, must match regulatory orientation. Through this feeling of fit, individuals feel an increased sense of value for their activity; this sense of value is incremental of the desirability of the outcome that arises from performing that activity and the efficacy of the goal pursuit to produce the desired outcome.

Regulatory focus is the orientation variable most commonly studied using regulatory fit (Cesario et. al., 2008); it has two primary motivational orientations: promotion focus and prevention focus (Higgins, 1999). Promotion orientation is associated with the presence or absence of positive outcomes (gains or non-gains), whereas a prevention orientation is associated with the presence or absence of negative outcomes (losses or non-losses). In a state of promotion focus, an individual is oriented toward accomplishments, hopes, and aspirations, and the



discrepancy between his/ her current self and his/ her ideal self. Alternatively, in a state of prevention focus, an individual is oriented toward safety, responsibilities, and obligations, and the discrepancy between his/ her actual self and his/her ought self. Each motivational orientation is associated with a preferred goal pursuit strategy. Promotion motivational orientation is associated with the use of “eagerness” goal pursuit strategies, whereas prevention motivational orientation is associated with the use of “vigilant” goal pursuit strategies. Employment of an eager strategy leads individuals to focus on attaining positive outcomes, and employment of a vigilant strategy leads individuals to focus on avoiding negative outcomes.

Regulatory fit manifests when the goal pursuit strategy is consonant with motivational orientation, i.e., eager goal pursuits when in a state of promotion focus, and vigilant goal pursuits when in a state of prevention focus. Fit enhances the sense of importance to the activity, leading to higher commitment to the goal overall (Spiegel, Grant-Pillow, & Higgins, 2004; Higgins, Idson, Freitas, Spiegel, & Molden, 2003). Higgins (2000) claims regulatory fit theory to be a generalized principle; self-regulation is strongest when any motivational orientation and the adopted strategy are in congruence. Thus, fit effects should be apparent with the use of any regulatory orientation variable, such as goal orientation.

### *Goal Orientation*

VandeWalle (1997) posits differences in goal preferences, or goal orientation. There are two overarching goal orientations: mastery and performance goal orientation. Mastery orientation leads individuals to improve and develop new skills, and performance orientation leads individuals to demonstrate ability to others. Performance orientation can be further bifurcated into performance-approach and performance-avoid goals (Elliot & Church, 1997). Possessing performance-approach goals directs individuals' focus toward performing

proficiently relative to others, whereas possessing performance-avoid goals directs individuals' focus toward avoiding incompetence relative to others.

This study will use mastery orientation and performance-approach orientation. In terms of testing regulatory fit with goal orientation, these two dimensions show stronger relationships with outcomes (which will be further discussed below) and aptly represent the “mastery/ learning” versus “performance/ competitive” dichotomy. Mastery-oriented individuals use feedback to improve their current skills and develop new skills to succeed. Performance-approach orientation prompts to individuals using feedback to gain positive perceptions and to outperform others. Increases in performance-avoid goal orientation are associated with decrements in performance (Radosevich, Radosevich, Riddle, & Hughes, 2008). It is illogical to attempt to increase corrective feedback utilization by inducing a performance-avoid motivational orientation. As such, in the current study, regulatory fit will only be evaluated for mastery-orientation and performance-approach orientation.

Goal orientation has been examined as a trait (Button, Mathieu, & Zajac 1996; VandeWalle, 1996) or as a situationally dependent state (Ames, 1992; Nicholls, 1984). Recent research solidifies the distinction between state and trait goal orientation. Chen, Gully, Whiteman & Kilcullen (2000) studied the effect of learning performance by measuring trait and state goal orientation separately; their findings suggest that state goal orientation mediates the relationship between trait goal orientation and learning performance. Whether trait or state goal orientation is preferred at any given time depends on the strength of the situational cues present (VandeWalle, 1997). If there are no situational cues present to influence goal orientation, chronic orientation is preferred, whereas if there are strong situational cues present to influence goal orientation, state driven orientation overrides chronic preferences.

Regulatory fit is created when the strategies pursued to achieve a goal strengthens regulatory orientation (Higgins, 2000). As previously mentioned, goal pursuit strategies are independent to each regulatory orientation variable. Individuals employ a “learning” goal pursuit strategy to sustain mastery goal orientation. At this time, the term for the goal pursuit strategy for performance goal orientation has yet to be identified. Thus, I have termed it “competitive” goal pursuit for the purposes of this study. This paper proposes studying feedback utilization as a function of fit between goal orientation and its goal pursuit strategies; when mastery orientation is paired with learning-goal pursuit or performance orientation is paired with competitive-goal pursuit, it is expected that individuals in a state of regulatory fit will utilize more corrective feedback as compared to individuals in a state of non-fit.

#### *Self-Monitoring*

Self-monitoring refers to an individual's ability to act in a socially appropriate manner by referring to environmental cues (Snyder, 1974). Whether individuals are labeled as high self-monitors (HSMs) or low self-monitors (LSMs) depends on their sensitivity to environmental cues. HSMs are guided by the environment and are able to easily adapt to new situations, whereas LSMs are less attuned to environmental cues. In the current study, regulatory fit/non-fit will be manipulated by priming participants to orient toward either mastery or performance-approach orientation and by providing corrective task feedback framed as either learning goals or competitive goals. Sensitivity to environmental cues may influence the effect of fit on self-monitoring.

#### *Current Study*

To summarize, the purpose of this study is to test regulatory fit as a generalized principle when using goal orientation as the regulatory orientation variable. I propose that sustaining fit

between goal orientation and goal pursuit (i.e., mastery-learning or performance approach-competitive) will lead to greater utilization of corrective feedback than states of non-fit (i.e., mastery-competitive or performance approach-learning). Furthermore, given that motivational orientation and goal pursuit will be experimentally manipulated, I expect self-monitoring to moderate regulatory fit effects, such that fit effects will be stronger for high self-monitors than low self-monitors.

## Literature Review

### *Task Feedback*

Task feedback refers to “response-produced feedback which is a direct result or consequence of task execution” (Goodman, 1998). Task feedback generally focuses on feedback from the job itself, or the information about performance acquired directly from a work activity. Feedback helps to increase communication within the organization, clarifies role perceptions, and provides an opportunity to gain information and advice (Humphrey, Nahrgang, & Morgeson, 2007). Task feedback is critical for employees to work toward a goal; it provides information about performance and performance-goal discrepancy (Humphrey et al., 2007; Locke & Latham, 1990). According to Greller and Parsons (1995), task feedback is “available on demand, concurrent with performance, and does not risk loss of face,” which is possibly why employees value task feedback over formal feedback. Task feedback has several positive consequences. Receiving feedback about task performance increases intrinsic motivation (Li, Li, and Wang, 2009). At the individual level, task feedback also has a strong positive correlation with job satisfaction, which included supervisor satisfaction, coworker satisfaction, compensation satisfaction, and promotion satisfaction (Humphrey et al., 2007). In virtual team settings, task feedback has a positive relationship with motivation, satisfaction, and performance (Li et al.,

2009; Geister, Konradt, & Hertel, 2006).

*Antecedents of Feedback Utilization.* The literature on antecedents of feedback utilization can be categorized into person antecedents, situational antecedents, and the person-situation antecedents. Person antecedents refer to individual characteristics that affect feedback utilization. Person variables generally refer to stable person characteristics. One person variable in particular has a significant relationship with feedback is overconfidence. According to Gigerenzer, Hoffrage, & Kleinbolting (1991), an individual is said to be overconfident when “confidence judgments are larger than the relative frequencies of correct [responses]” (Gigerenzer, 1991, p. 506); an individual is overconfident when their confidence judgments are higher than the number of correct responses. Previous research has shown that when an individual is overconfident, they tend to ignore corrective feedback (Arkes, Dawes, and Christensen, 1986). A related construct, self-efficacy is an individual’s belief that he/ she has the ability to succeed at a specific task (Bandura, 1977). Self-efficacy is related to how much individuals accept developmental feedback, i.e., for developmental feedback to be utilized, the incumbent must believe that “they are actually capable of developing skills” (Maurer, 2001). Mitchell and Maurer (1998) found that self-efficacy for developing skills is associated with self-seeking feedback, receipt of coaching, and practicing skills. Self-seeking feedback, or feedback-seeking behavior, is an example of a person antecedent. While feedback usually involves top-down transfer of information about whether or not an incumbent is meeting goals, self-seeking feedback occurs when an individual is inherently motivated to seek out feedback to meet and exceed goals to, in turn, flourish in an organization (Ashford and Cummings, 1983). However, according to Ilgen et al. (1979), “feedback is only necessary and useful to the extent that it provides an incremental increase to knowledge.” This implies that there is always a degree of uncertainty when it comes to knowing

how to achieve goals in the workplace; otherwise, there would be no need for feedback, and this uncertainty is related to goal attainment (Ashford & Cummings 1983). Person antecedents study the effect of stable person characteristics; however, environmental cues also affect feedback processes.

Situational antecedents refer to aspects of the feedback situation that enhances or inhibits feedback utilization. Situational antecedents include the timing, frequency, specificity, sign and source of the feedback (Lam, DeRue, Karam, & Hollenbeck, 2011; Ilgen et al., 1979). These dimensions of feedback stimulus affect whether or not the incumbent accepts the feedback. Timing is an important concept because “shorter feedback latencies improve [skill] acquisition and performance,” thus the longer the delay in receiving feedback, the less the feedback will affect future performance, so good timing increases the probability that an individual will link feedback to future behavior (Schooler & Anderson, 2008, pg. 702). Feedback valence also affects whether or not the feedback will be accepted; incumbents “perceive and recall” positive feedback with higher accuracy as compared to negative feedback (Kluger & DeNisi, 1996; Ilgen et al., 1979). Negative feedback likely instigates ego defense mechanisms that limit feedback processing (Ashford & Cummings, 1983). Another situational antecedent effect is that frequency increases the likelihood of feedback utilization, *if* feedback is related to task behavior, and the recipient correctly interprets feedback messages (Salmoni, Schmidt, & Walter, 1984; Ilgen et al., 1979). Sources of feedback in organizations include supervisors, coworkers, the environment (organization), the task itself, and the individual (Greller, 1980; Greller & Herold, 1975). Feedback source affects the acceptance of the feedback based on credibility and trustworthiness. Recipients need to know that sources are credible in that they “possess the expertise necessary to judge their behavior accurately.” Not only should the source be credible, but he/ she needs to be

trustworthy for the feedback to positively affect the recipient (Ilgen et al., 1979). According to Hays & Williams (2011), the credibility of a feedback source is based on the extent to which “he/she has relevant and accurate information regarding the individual’s performance” (pg. 498). Further, of importance is the extent to which the source is available, or how easily the individual is able to get information from the source (Hays & Williams, 2011; Morrison & Vancouver, 2000). By not integrating the influence of person states, situational antecedents alone cannot provide a comprehensive explanation of feedback utilization.

The typical person x situational approach examines feedback utilization as a function of the interaction between a stable person characteristic and a situational variable. For example, according to Donovan and Hafsteinsson (2006), individuals’ responses to goal-performance discrepancy feedback will be affected by their dispositional factors. They hypothesized that individuals’ (dispositional) self-efficacy and goal orientation will influence responses to discrepant feedback. They found that high self-efficacious and strong performance-goal oriented individuals engaged in greater upward goal revision when faced with large goal-performance discrepant feedback.

The person and situation approaches are insufficient for understanding the complexities of feedback utilization because feedback utilization is explained as an interaction between a stable person characteristic and environmental cues (e.g., Grimm, Markman, Maddox, & Baldwin, 2009). This notion of a constant person characteristic fails to recognize that motivational orientation is malleable state, and the source of a current motivational orientation state can come from within or from environmental cues.

Regulatory fit offers a more dynamic explanation of feedback utilization; fit takes into account whether an individual is motivated by either mastery or performance goals, i.e., current

state of motivational orientation. In dynamic explanations of task feedback utilization, such as fit, both the person and situation states vary over time. In the fit explanation, individuals can be influenced by chronic preferences or situational primes such that their preferences (for feedback) can change based on the situation. As such, fit and non-fit can be created through environmental cues, and fit impacts feedback utilization through increased motivation and task engagement.

### *Regulatory Fit*

According to Higgins (1997), the hedonic principle was the leading explanation for motivational processes for centuries; it was the primary way to conceptualize approach-avoidance. In the 1950s, researchers began to expand their knowledge of motivation by taking a self-regulation approach (Higgins 1997). Thus, researchers began to study the particular strategies individuals employ to approach pleasure and avoid pain. Self-regulation is currently a popular framework used by researchers to study individuals' motivational processes. More specifically, regulatory fit, a theory of self-regulation, can be readily applied to I/O psychology to study concepts such as feedback utilization.

*Components of Fit.* There are mechanisms that sustain or disrupt an individual's drive to pursue a goal: 1) motivational orientation, 2) goal pursuit strategy, and 3) anticipation of rewards (Higgins 2000; 2005). Regulatory fit occurs when the goal pursuit strategies matches motivational orientation, whereas regulatory non-fit occurs when the goal pursuit strategy does not sustain motivational orientation. Higgins (2007) uses the example of two students with different regulatory orientations who are striving for the same goal of attaining an A in course. One student is promotion-focused, focusing on hopes, goals, and aspirations, and the other student is prevention-focused, focusing on duties and obligations. Both students are equally capable of achieving an A, and they use different goal pursuit strategies to do so. The promotion-



focused student, who views the course as a hope or aspiration, will adopt an eager goal pursuit strategy and will go above and beyond what is required for the course; he/ she may find additional resources on the material, attend lectures on the subject matter, etc. The prevention-focused student, who views the course as a duty or obligation, will use a vigilant goal pursuit strategy and will focus on attending all classes, completing the required readings and homework assignments, etc. Both students are working toward the same goal, but are adopting different goal pursuit strategies that match with their regulatory orientation, thus, achieving regulatory fit. Thus, according to Aaker and Lee (2006), “regulatory fit is conceptualized as the increased motivational intensity that results when there is a match between the manner in which a person pursues a goal and his or her goal orientation.”

*Relationship with Regulatory Focus.* Regulatory fit is a general principle of self-regulation, however, it was developed using regulatory focus theory to specify motivational orientation. Regulatory focus theory posits that an individual employs either promotion or prevention oriented attitudes and behaviors when seeking to achieve goals (Higgins 1997). Promotion focused individuals are concerned with hopes, goals, and aspirations, whereas prevention focused individuals are concerned with duties and obligations (Higgins 1997). Promotion and prevention orientation exist as two separate mechanisms, and thus cannot be conceptualized as existing on opposing ends of a spectrum. Further, regulatory fit theory describes different goal pursuit strategies individuals may adopt; these are behavioral strategies employed by individuals that either sustain or disrupt their regulatory orientation. The two goal pursuit strategies associated with regulatory focus are eagerness strategy and vigilant strategy. Promotion-focused individuals often engage in eagerness goal pursuit strategies in which they actively pursue positive outcomes and actively avoid the loss of positive outcomes (errors of omission) (Crowe

and Higgins, 1997). Prevention-focused individuals tend to engage in vigilant goal pursuit strategies in which they actively avoid negative outcomes and work to inhibit negative outcomes (errors of commission).

*Chronic vs. Situational.* Regulatory orientations can be accessed either chronically or contextually (Scholer and Higgins, 2012). Chronic accessibility is a relatively stable preference in regulatory orientation. According to Scholer and Higgins (2012), preferences for motivational orientation arise at an early age. Temporal accessibility results from situational factors; regulatory orientation may be temporarily, situationally manipulated, meaning that an environment can maintain and foster regulatory orientation. Regulatory orientation as a chronic, individual difference is generally studied as a personality variable. Many measures have been developed to measure chronic differences; these measures assess differences in promotion versus prevention orientation, or differences in facets of regulatory focus, such as emphasis on ideal vs. ought, gains vs. losses, etc. (Scholer & Higgins, 2010). Regulatory states can also be situationally induced through framing tasks as either gains/ non-gains, nurturance concerns, or ideal states (for promotion orientation) or losses/ non-losses, security concerns, or ought states (for prevention orientation) (Scholer & Higgins, 2010).

Regulatory fit effects are equally robust when manifested through chronic or situational contexts. Keller and Bless (2006) show the effect of chronic and situationally-induced regulatory fit on cognitive functioning; these results showed that experiencing fit in both (chronic and situational) contexts resulted in higher cognitive test performance. Regulatory fit can be influential to individuals from either context and across different situations through the sensation of “feeling right.”

*Consequences of Fit.* Regulatory fit has been shown to influence a number of factors (Higgins, 2005). These consequences of fit include: increased motivation to sustain an orientation, increased engagement to a decision or goal, stronger evaluative reactions, increased strength of value, increased persuasion, and behavior change.

Higgins posits that when there is a match between regulatory orientation and goal pursuit, regulatory fit is experienced, and more specifically, value from it, independent of the outcome of a decision (Higgins 2000, 2002). Achieving this value from fit gives the individual a sense of “feeling right” and further motivates him/ her to sustain that orientation (Higgins 2000; 2002). Regulatory fit also affects value by increasing level of engagement to a decision and making it feel more right. Spiegel et al. (2004) found that individuals experienced higher levels of motivation and engagement to health decisions when they had fit between regulatory orientation and framing of health messages.

According to Higgins (2000), individuals have stronger evaluative reactions if their goal pursuit strategy matches their regulatory orientation. Regulatory fit has an effect on feeling right about decisions. Camacho, Higgins, and Luger (2003) examined this by evaluating conflict resolutions and public policies. Evaluations of decisions were seen as more right when framed to be congruent with the respective regulatory orientation. Higgins et al. (2003) illustrate the concept of increased strength of value from fit; strength of value was measured by assessing the monetary value participants assigned to an object. They found that participants experiencing fit assigned higher value to a target object. Cesario et al. (2004) studied the effect of regulatory fit on perceived persuasiveness of a message; they found that promotion-focused individuals are more persuaded by eager-framed messages, whereas prevention-focused individuals are more persuaded by vigilant-framed messages. The aforementioned Spiegel et al. (2004) study

successfully shows behavioral change as a result of regulatory fit. Individuals who experienced fit between regulatory focus and outcome framing engaged in more healthy behaviors by eating more fruits and vegetables as compared to individuals in the non-fit condition. Finally, researchers have used regulatory fit to assess decision making (Camacho et al., 2003), attitude and behavioral change (Spiegel et al., 2004), and task performance (Forster, Higgins, and Idson, 1998; Bianco, Higgins, and Klem, 1998).

*Task Feedback and Regulatory Fit.* Previous studies (e.g., Kluger & DeNisi, 1996) have shown that both positive and negative feedback can increase, decrease, or have no effect on motivation. Van-Dijk and Kluger (2004) used a self-regulatory perspective to explain under what conditions sign of feedback can affect motivation; they hypothesized that both positive and negative feedback can increase motivation, depending on whether the goal is viewed as an aspiration or an obligation, respectively. According to Van-Dijk and Kluger (2004), positive feedback further increases motivation when individuals are in promotion orientation, and negative feedback further increases motivation when individuals are in prevention orientation. Van-Dijk and Kluger (2011) extended their study of self-regulatory influences on feedback and motivation by assessing the moderating effects of task type on the relationship between feedback valence on motivation and performance. The premise of this hypothesis was that different tasks can induce different regulatory orientations; for example, “promotion tasks,” requiring creativity, can induce promotion focus and “prevention tasks,” requiring vigilance and accuracy, can induce prevention orientation. Further, regulatory orientation was thought to moderate the relationship between feedback sign and motivation. Positive feedback (as compared to negative feedback) increased motivation and performance for individuals working on promotion tasks, but this effect was reversed for individuals working on prevention tasks (Van-Dijk & Kluger, 2011).

Holmes and Hauenstein (2010) evaluated the effect of regulatory fit on utilization of veridical, corrective feedback, as well as feedback recall and feedback attitudes. The fit condition was formed through an interaction between feedback framing (eager vs. vigilant) and regulatory orientation (promotion vs. prevention). Results showed that fit increased behavioral manifestations of corrective feedback, and the effect of fit on recall of feedback was partially supported.

These studies suggest that using theories of self-regulation may help understand the complex relationship between feedback, motivation and performance. The aforementioned study (e.g., Holmes & Hauenstein, 2010) has used fit to increase task feedback utilization. Regulatory fit theory uses a more dynamic approach to explain behavior change by accounting for the fact that individuals are likely to change preferences for feedback depending on their motivational orientation state.

### *Goal Orientation*

Regulatory fit is a meta-theory that can accommodate any motivational orientation and goal pursuit strategy (Higgins, 2000). It is a general principle that can be utilized with any regulatory orientation variable and goal pursuit strategies to produce fit/non-fit. The generality of fit is apparent because it concerns the relationship between orientation/attitude toward an activity and the actual behavioral strategies used to engage in the activity. Thus far, regulatory focus has been the primary self-regulation theory used to study fit (Cesario et al., 2008). This study will use goal orientation, an achievement motivation variable that is the dominant theory of achievement motivation in I/O psychology, as a test of regulatory fit to assess feedback utilization.

Goal orientation is a theory of achievement motivation that posits that individuals are

motivated by different classes of goals. Researchers (e.g., McClelland, Atkinson, Heider) have long been interested in theories of achievement motivation prior to the inception of goal orientation. Two criteria must be fulfilled using achievement motivation theories: 1) accounting for why an individual chooses one path among a set of alternatives, and 2) accounting for the degree and length of time for which the motivation for the activity persists (Atkinson, 1957).

*Origination of Achievement Motivation.* The foundation of achievement motivation began with McClelland, Atkinson, Clark, and Lowell's (1953) seminal book *The Achievement Motive*, in which they define achievement motivation in terms of the relationship between affect and evaluated performance. McClelland and colleagues emphasize there must be at least a positive, moderate correlation between achievement motivation and performance. Atkinson (1957) extended the achievement motivation literature with his Expectancy x Value theory, which posits that an individual's decision to participate in an activity depends on three factors: 1) the motive to succeed, 2) the expectancy, or probability, of success, and 3) the incentive, or the amount gained assuming success. These three factors allow an individual to anticipate the consequence of his/ her actions, understand the attractiveness/ unattractiveness of that consequence, and allow an individual to strive toward succeeding at a particular goal (Atkinson, 1957).

*Emergence of goal orientation.* Theories of achievement motivation became prominent in the 1970s in the educational psychology literature as researchers, such as Dweck, Ames, and Diener sought to study learned helplessness of children in achievement-based settings. Dweck (1975) noted that children's attribution toward failure either encouraged or inhibited their performance on future tasks. After experiencing failure, some children are resilient and perform the responses necessary to succeed in subsequent tasks, whereas other children feel helpless and are more likely to give up. "Helpless children" attribute their failure to lack of ability and are

more likely feel as though their level of effort will bear no impact on the outcome. Alternatively, “mastery-oriented” children, or those who attributed failure to lack of effort, displayed enhanced performance following failure by disassociating their behavior with performance outcomes and attempting to formulate new approaches for success (Diener & Dweck, 1978). This indicates that childrens’ perceived relationships between their abilities and outcomes are the keys to conceptualizing motivational constructs in achievement situations.

To explain this effect, Diener and Dweck (1978) conceptualized goals as being performance-oriented or learning-oriented. Performance goals deal with “gaining favorable judgments” relative to others, whereas learning goals deal with individuals “increasing their competence.” Thus, individuals motivated by performance goals view achievement situations through judging their own competence and performance relative to others, whereas individuals motivated by learning goals view achievement situations as an opportunity to gain knowledge or improve their expertise. This conceptualization of an individual’s achievement goal as being either mastery-oriented or performance-oriented led researchers to propose that children assume one of these goals in achievement based settings, which leads to different attributions and different patterns of affect, cognitions, and behaviors (Elliot, 2005).

*Evolution of Goal Orientation Constructs.* Goal orientation has been used in many disciplines including industrial/ organizational psychology, and is currently the dominant theory of achievement motivation in I/O psychology (e.g., Button et al., 1996; Elliot, McGregor, & Gable, 1999; VandeWalle et al., 1999). Similar to regulatory focus, individuals have a chronic goal orientation, but goal orientation can be instantiated by situational cues, also (Button et al., 1996). Several researchers (e.g., Button et al., 1996; Ford, Smith, Weissbein, Guly, & Salas, 1998) have attempted to empirically link mastery and performance goal orientation and performance

outcomes. Although these studies identified a relationship between mastery goal orientation and performance, the relationship between performance goal orientation and performance outcomes remained unclear, which led researchers to approach performance goal orientation as a multi-factor construct. Using approach-avoidance constructs, early studies (Elliot & Church, 1997; VandeWalle, 1997) bifurcated performance goal orientation into performance-approach and performance-avoid, resulting in a three-factor model of goal orientation, which has yielded empirical support such that mastery goals, performance-approach, performance-avoidance goals are independently related to performance outcomes, though this evidence seems to be clearer for mastery and performance-avoidance goals (Elliot and Church, 1997).

*Consequences of Goal Orientation.* There are many proximal and distal consequences associated with goal orientation. Proximal consequences of goal orientation include: self-efficacy, metacognition, conflict style, cognitive engagement, and feedback seeking. Distal consequences of goal orientation include: academic outcomes, organizational outcomes, performance, satisfaction, and organizational commitment.

According to DeGeest and Brown (2011), high self-efficacy serves as a motivating mechanism through which individuals set more difficult goals, exert more effort to achieve those goals, and have higher persistence while pursuing goals. Trait mastery goal orientation (MGO) is positively associated with self-efficacy, self-set goal levels, and effort (VandeWalle, Cron, & Slocum, 2001; Payne, Youngcourt, & Beaubien, 2007). Metacognition refers to a higher-level cognitive process that provides information and control over one's cognitions. It has a strong positive association with state MGO, as mastery orientated individuals actively engage in learning strategies to increase their knowledge (Bell & Kozlowski, 2008; Ivancic & Hesketh, 2000). Goal orientation could be a motivational mechanism for explaining the factors that



contribute for conflict style and behavior (Zarankin, 2007). An individual's conflict style, based on self-interest and other-concern, leading to five different types: collaborating, forcing, accommodating, avoiding, and compromising (Blake & Mouton, 1964). According to Zarankin (2007), individuals who are mastery-oriented may be more likely to adopt the collaborating, accommodating, or compromising conflict style, as they are concerned with learning and improving themselves in conflict resolution; thus they are more likely to have concern for others. Performance-oriented individuals may be more likely to use a forcing or avoiding conflict style, as they are concerned with self image and likely have a lower concern for others (as compared to those who are mastery-oriented), thus leading to adoption of forcing or avoidance conflict styles. Mastery-approach (MPGO) and performance-approach (PPGO) goal orientations positively influence cognitive engagement. This is possibly because mastery-approach oriented individuals are primarily focused on learning and competence by attempting to increase their knowledge and skills. Further, performance-prove individuals will also more likely exhibit higher levels of cognitive engagement because it will help them achieve their goal and portray a positive image of themselves (Radosevich et al., 2008).

Goal orientation is associated with academic outcomes through certain achievement behavior strategies, and organizational outcomes of performance, satisfaction, and commitment. Trait MGO has incremental validity in predicting job performance over and above cognitive ability and the Big 5 personality factors (Payne et al., 2007). Job performance is shown to be influenced by a high level of (state and trait) MGO (VandeWalle et al., 2001) and low level of performance-avoid (APGO) goal orientation (Payne et al., 2007). Further, MGO is positively related to planning and goal setting behaviors, which can lead to positive organizational outcomes. Mastery-oriented individuals display higher persistence in performing tasks; further,

MGO is related to long-term performance (Payne et al., 2007). Alternatively, PPGO is more strongly related to short-term performance. Trait and state MGO is positively related to learning, academic, and job performance, and trait and state PPGO are both slightly positively related to job performance (Payne et al., 2007). MGO is generally positively related to job satisfaction and performance orientation has a negative relationship with job satisfaction (Janssen & Van Yperen, 2004). Alternatively, performance-oriented individuals use social comparison to make performance evaluations, which may seem outside their locus of control, and this external locus may contribute to their negative affect (Janssen & Van Yperen, 2004). Lee and colleagues found that MGO is positively related to affective commitment (emotional attachment to the organization), normative commitment (obligation to the organization), and continuance commitment (cognizance of costs associated with leaving), while performance orientation is only related to affective commitment.

*Goal Orientation and Feedback.* The goal orientation and feedback literature primarily focuses on the relationship between goal orientation as an individual difference variable in feedback seeking processes. It is accepted that feedback is essential to improving performance, however, relatively few individuals actively seek feedback through inquiry, or “directly asking others for feedback” (VandeWalle & Cummings, 1997). MGO individuals view outcomes as a result of effort and focus on personal growth; these individuals view feedback as a tool to develop skills and further their development. According to VandeWalle and Cummings (1997), MGO individuals are more likely to seek out feedback. MGO individuals are likely to place higher utility on feedback received but to the extent that feedback is of high quality (Whitaker & Levy, 2012). Thus, those with a MGO place increased value on feedback seeking and, in turn, engage in more feedback seeking behaviors (Park, Schmidt, Scheu, & DeShon, 2007; Payne et

al., 2007; Tuckey, Brewer, & Williamson, 2002).

Performance-prove, or performance-approach, goal oriented (PPGO) individuals focus on impression management through self-enhancement and are concerned with projecting a positive image. These individuals place limited value on feedback but see it as an opportunity to gain positive appraisals; thus, they engage in feedback seeking behavior to the extent that they will receive positive evaluations (Tuckey et al., 2002). According to Whitaker & Levy (2012), PPGO individuals are less likely to recognize the utility of feedback, because they are more likely to view ability as a fixed attribute that cannot be influenced by other factors. Rather, individuals with a PPGO use feedback as an impression management tool to deliver positive information about themselves to others (Morrison & Bies, 1991; Tuckey et al., 2002).

If Whitaker and Levy are correct in their assertions, feedback should have no effect on performance-oriented individuals in the context of fit. I argue that the effect of regulatory fit will influence feedback utilization for three reasons. First, Whitaker and Levy refer to goal orientation as a chronic, stable orientation. In this study, goal orientation will be situationally manipulated, and experiencing fit between state goal orientation and related goal pursuit strategies is likely to produce fit effects that affect feedback utilization. Second, different characteristics of feedback are likely to affect utilization; individualized feedback that is corrective, veridical, and specific task feedback (as compared to vague, abstract feedback messages) will aid in impression management and help individuals project a more positive image (Kluger & DeNisi, 1996). Third, from a fit perspective, the type of feedback provided has significant implications on utilization. If individuals in a performance state receive feedback framed as learning strategies, the feedback may not be utilized or even seen as useful. By situationally manipulating goal orientation to induce fit/ non-fit conditions, I believe that

regulatory fit will successfully influence utilization of feedback in both a mastery state and a performance-prove state.

*Studying Feedback Utilization with Regulatory Fit using Goal Orientation.* This study will use mastery and performance-approach goal orientation, because these two states clearly represent the dichotomy between mastering information and using task performance to manage positive impressions. In goal orientation research, goal pursuit strategies have not been formally treated as distinct from goal orientation. However, goal orientation implies specific goal pursuits. Individuals in a state of mastery orientation sustain fit by employing learning goal pursuit strategies. They actively seek out ways to increase their knowledge and skill level. Individuals in a state of performance-approach orientation attain fit by employing competitive goal pursuit strategies. Competitive goal pursuit strategies allow an individual to actively seek out ways to: 1) improve how people view them, and 2) improve their relative standing in a group. In the case of goal orientation, fit occurs when mastery orientation is paired with a learning goal pursuit and when performance-approach orientation is paired with a competitive goal pursuit strategy.

According to self-monitoring theory, high self-monitors readily pick up on situational cues and modify their behavior accordingly, whereas low self-monitors are less sensitive to situational cues, and are less likely to modify behavior as a function of the situation. The fit between state goal orientation and state goal pursuit strategy may be moderated by self-monitoring.

### *Self Monitoring*

Self monitoring refers to an individual's ability to regulate his/her expressions and behaviors in a social situation (Fuglestad & Snyder, 2009). Self-monitoring theory states that individuals differ in the degree to which they are motivated and capable of monitoring their

behavior. These individual differences serve as the distinction between high self-monitors and low self-monitors. High self-monitors (HSMs) are proficient at identifying situational cues and engage highly in impression management and impression construction (Leary & Kowalski, 1990). As compared to HSMs, low self-monitors (LSMs) are less susceptible to situational cues. According to Fuglestad & Snyder (2009), HSMs and LSMs differ in the level of displayed behavioral consistency.

Individuals use both external and internal cues before reacting to some event. External cues are situational prompts that occur in the environment, whereas internal cues can refer to chronic dispositions or temporary affective states (Fuglestad & Snyder, 2009). High self-monitors are more strongly influenced by situational factors; thus, HSMs show greater behavioral variability across different situations. They adapt to the situation and behave accordingly due to high impression motivation and impression construction. Impression motivation is the degree to which individuals are motivated to control others' perception of them, and impression construction is the process individuals employ to project a certain image (Leary & Kowalski 1990). Alternatively, low self-monitors are greatly influenced by internal cues, such as dispositions and affective states (Fuglestad & Snyder, 2009). This leads to greater consistency between attitudes and behavior; LSMs are more likely to act in concert with their beliefs and judgments, and their actions are relatively unaffected by different situations. Thus, it can be inferred that LSMs have lower impression motivation and impression construction.

*Self Monitoring as a Chronic, Individual Difference.* Researchers have posited several plausible explanations for why there are chronic individual preferences for self-monitoring. Differences in communication patterns or treatment from adults in childhood may eventually form an individual's chronic disposition to high or low self-monitoring in adulthood (Gangestad &

Snyder 1985). Children who do not receive much attention may develop high self-monitoring tactics as a way of attracting attention from caregivers (Fuglestad & Snyder, 2009). Other studies (e.g., Rubin, 1980; Musser & Brown, 1981; Nelson, 1981) have posited that language acquisition differences or demographic differences in self-monitoring in childhood may eventually manifest into chronic individual differences for self-monitoring (Fuglestad & Snyder, 2009).

*Outcomes of Self Monitoring.* Self-monitoring is related to many work skills, such as leadership, conflict management, information management, and impression management (Kilduff & Kay, 1994). Research has shown much evidence that high self-monitors thrive in organizational settings. As compared to LSMs, HSMs' proclivity to quickly adapt and respond to different situations lead to greater positive outcomes. HSMs' engagement in impression construction enables them to promote an image that matches a higher position in the firm, which leads to high self monitoring to be related to greater promotions (Kilduff & Day, 1994). Perhaps because of their ability to collaborate and compromise with others (Baron, 1989), HSMs are more likely to emerge as leaders in work groups (Kilduff & Day, 1994). High self-monitoring is positively related to higher job performance (Kilduff & Day, 1994). Further, HSMs (as compared to LSMs) are more likely to receive high performance ratings (Day, Shleicher, Unckless, & Hiller, 2002), possibly because of their use of impression management (Gangestad & Snyder, 2000). Additionally, high self-monitors favor products marketed as "more attractive" (DeBono & Snyder, 1989) and are more likely to have positive associations toward a brand based on the situation. It can be inferred that high self-monitors are more likely to be persuaded by attractive, situational influences as compared to low self-monitors. High self monitors base their behavior on the situation, and the correlation between their attitudes and behavior is low, leading to greater behavioral variability across situations (Snyder & Tanke, 1976).

Due to their nature of acting in line with their beliefs and demonstrating more consistent behavior, LSMs are generally have higher job commitment (Day et al., 2002). LSMs also tend to develop stronger interpersonal relationships with others who have similar values and interests (Fuglestad & Snyder, 2009). Further, due to the more stable attitude-behavior relationship, LSMs may be better equipped to handle ethical concerns (Fuglestad & Snyder, 2009). Additionally, Low self-monitors tend to favor products marketed as “more valuable” (DeBono & Snyder, 1989) and are more likely to be positively influenced toward brands based on personality associations (Aaker 1999). Low self-monitors are less responsive to situational differences and tend to act based on their “relevant inner states” (Snyder & Tanke, 1976). LSMs’ behaviors are generally based on their values and dispositions leading to greater behavioral consistency across situations.

*Self-Monitoring and Feedback.* Self-monitoring has been studied in the context of behavioral change. In organizational science research, several studies have examined the effect of self-monitoring and feedback on institutional staff, such as employees of residential homes for the mentally disabled (Richman, Riordan, Reiss, Pyles, & Bailey, 1988; Burg, Reid, & Lattimore, 1979; Burgio, Whitman, & Reid, 1983). Richman et al. (1988) found that employees overall exhibit higher behaviors that are on-schedule and on-task when employees are engaging in self-monitoring and when supervisory feedback is added to the self-monitoring process. In this study, on-schedule behavior and on-task behavior were used as the definitions to measure behavior change. On-schedule behavior referred to if employees were performing the “assigned activity according to their posted schedule”; on-task behaviors were recorded if employees performed behaviors that were appropriate for scheduled activities regards of the posted schedule (Richman et al., 1988). The self-monitoring and self-monitoring plus feedback conditions were compared

to the baseline condition for on-schedule and on-task behavior. In the self-monitoring condition, each employee carried a card, which contained a copy of their individual schedule and a “definition for appropriate on-task behavior.” Employees monitored their behavior by initially their cards when they completed a scheduled activity or explaining why they could not carry out said activity.

In the self-monitoring condition plus feedback, supervisors gave feedback twice a day on the “staff’s schedule following and on- or off-task behavior.” Employees were either praised or corrected on the activity and their behavioral performance. On-schedule behavior increased during the self-monitoring condition (as compared to the baseline) on an average of 50%. When feedback is added, on-schedule behavior increased an additional 14%. On-task behavior increased during the self-monitoring condition (as compared to the baseline) on an average of 36%. When feedback is added, on-task behavior increased an additional 16%. The results of Richman et al. (1988) show that self-monitoring and supervisory feedback are linked to behavioral change.

Impression management connects performance-approach goal orientation and self-monitoring. High self-monitors and individuals in a state of performance-approach orientation are both concerned with impression management to portray a positive self-image. Additionally, the competitive goal pursuit strategies that will be used in this study provide the information needed to promote a positive image. I will be studying the effects of self-monitoring as an exploratory mechanism by examining whether high self-monitors are more highly affected by receipt of competitive goal pursuit strategies. More specifically, I will be looking to see whether high self-monitors will show stronger fit effects when placed in a state of performance-approach



orientation or whether fit effects will not significantly differ between performance-approach and mastery approach orientation.

### *Study Overview*

In the current study, the effects of regulatory fit on corrective feedback utilization were tested using goal orientation; additionally, an exploratory analysis was conducted on self-monitoring as a potential moderator of situationally-induced regulatory fit. I tested the effect regulatory fit on feedback utilization by experimentally manipulating goal orientation and framing of feedback. This was in the context of an in-basket task, as used in assessment centers. The in-basket task was broken up into two segments and consisted of reviewing a set of memos. Participants first completed part one of the in-basket task. Goal orientation was then manipulated, and participants received feedback framed as either learning feedback or competitive feedback. They then completed a filler task, after which they completed segment two of the in-basket task. It was expected that self-monitoring will moderate fit effects, such that the environmental manipulations would have a greater impact on high self monitors as compared to low self monitors, since high self monitors are more influenced by situational factors.

### *Hypotheses*

Hypothesis 1: Regulatory fit/non-fit will lead to higher/lower task feedback utilization.

1a: Mastery-oriented individuals will display greater feedback utilization when feedback is framed using Learning goal-pursuit as opposed to Competitive goal-pursuit.

1b: Performance-oriented individuals will display greater feedback utilization when feedback is framed using Competitive goal-pursuit as opposed to Learning goal-pursuit.

Hypothesis 2: Regulatory fit/ non-fit will lead to higher/ lower levels of feedback processing.

2a: Mastery-oriented individuals will have greater recall of feedback recommendations

when feedback is framed using Learning goal-pursuit as opposed to Competitive goal-pursuit

2b: Performance-oriented individuals will have greater recall of feedback recommendations when feedback is framed using Competitive goal-pursuit as opposed to Learning goal-pursuit.

## Methods

### *Participants*

The participants in this study were undergraduate psychology students who were recruited through the Virginia Tech SONA System, the online experiment management system. Participants were required to be at least 18 years of age and proficient English speakers. As compensation, participants received 2 points of extra credit that could be added to any undergraduate psychology course of their choice.

A power analysis was conducted using GPower 3 (Faul, Erdfelder, Lang, & Buchner, 2007) to determine sample size. To detect a two-way interaction effect with a power of .80, effect sizes are approximately at .28 for 26 participants in each condition (104 total).

### *Design*

The basic experimental design was a 2 (Goal Orientation: Mastery vs. Performance-Approach) x 2 (Goal Pursuit: Learning vs. Competitive) Analysis of Covariance (ANCOVA), with number of feedback recommendations given as a covariate. To explore self-monitoring effects, an individual difference self-monitoring score was added to the model as a person variable.

### *Procedure*

Participants were individually brought into the lab after registering for the study on SONA. Once they arrived, they were required to provide proper identification and turn off any electronic devices, and sign the Informed Consent Form (APPENDIX A). They were told that they were going to perform two segments of an in-basket task and complete two additional questionnaires that examined managerial potential and feedback. The study took approximately 70 minutes. After signing the Informed Consent Form, participants were asked to complete a “Demographics Questionnaire” (APPENDIX B).

Participants were then given detailed instructions on the in-basket task (APPENDIX C). They were told that they had to perform two segments of an in-basket task; the first session lasted 15 minutes and the second 20 minutes. This in-basket task consisted of a set of memoranda that the participant reviewed. They were informed that their performance on the tasks would be monitored and that they would receive individualized feedback after the first in-basket session. After receiving feedback, they completed the second portion of the in-basket task.

After the participants were briefed on the in-basket task, they received the written in-basket task instructions, which they read and had the opportunity to ask any questions. Then, each participant was presented with the in-basket task materials, including the set of memos, a black pen, a yellow highlighter, and scrap paper. The administrator informed the participant that he/ she would have 15 minutes for this first segment. Participants were to use the black pen and yellow highlighter to make any notes necessary on the memos. Once a memo was finished, the item was placed in “out-basket #1.” The administrator then removed and scored each memo and placed it in “out-basket #2” after it was reviewed. Participants were told that they could remove a memo from out-basket #2 at any time if they wished to change any responses, but the memo must be returned to out-basket #1. Participants could also place memos in a separate “ignore

basket.” Participants were given a two-minute warning to finish up the first segment. After the first segment was finished, participants were instructed to stop working, and the administrator collected all items, including the any memos not completed from out-basket #1. Memos placed in the ignore basket were marked with a star using the yellow highlighter. Goal orientation was then manipulated.

Once goal orientation was manipulated, the administrator provided the participant with written feedback recommendations that were framed as either learning goals or competitive goals.

Administrators then addressed any questions participants had regarding the feedback. The written feedback recommendations were then removed. Participants then completed a filler, memory recall task. Following the filler task, the administrator returned the in-basket task memos to the participants in the same order in which it was collected. The participant was then given 20 minutes to complete the second segment of the in-basket task.

For the second segment, the participant was given a blue pen, an orange highlighter, and scrap paper; the difference in colors was used to distinguish any changes made from the first segment of the task. The same instructions were provided for segment two: participants were to place completed memos in out-basket #1, they could revisit any memos from out-basket #2 provided they place the revised memo back in out-basket #1, and they could place any memos in an ignore basket. The participant was again given a two-minute warning to finish up any memos.

After completion of the second segment, participants were provided with a piece of paper and asked to recollect and write down as many feedback recommendations they could remember. After finishing this task, participants were asked to complete the Eighteen-Item Measure of Self-Monitoring (Appendix D) (Snyder & Gangestad, 1986). The participant was then given a

Debriefing Form (APPENDIX E) and was fully debriefed on the study. Once the participant's questions were addressed by the administrator, he/ she was thanked for his/ her participation.

### *In-Basket Task*

In-basket tasks are generally used for organizations for training and assessment purposes (Cascio & Aguinis, 2005). The in-basket task, as mentioned above, may be used to assess managerial potential by presenting participants with a managerial task of attending to a set of memos. The in-basket task in this study was adapted from Jaffe (1968) and Holmes and Hauenstein (2012) and used 30 memos that consist of different scenarios. Other materials used in the task included task instructions, a month-calendar, and a chart of the fictional organization's hierarchy. The participants assumed the role of a manager at a fictional company, and his/ her responses on these memos were assessed using a feedback checklist, which was also adapted from Jaffe (1968) and Holmes and Hauenstein (2012). There are six managerial goals that are captured by the feedback checklist; these include: actively manage information, prioritize issues, resolution of critical issues, resolve conflicting requests, efficient use of meetings, and effective leadership. The feedback recommendations fall under one of these six goals.

### *Training of Research Assistants*

Undergraduate research assistants were trained to run the study, administer the in-basket task, and score the memoranda completed by participants. Research assistants were familiarized with the study outline and the in-basket task. After getting acquainted with the protocol, an explanation of the Performance Feedback Checklist (APPENDIX F) and a Scoring Decision Aid (APPENDIX G) was provided. The checklist provided research assistants a list of the behaviors important to for assessing managerial potential, and the scoring aid provided specific feedback statements (i.e., examples of relevant behaviors) that correspond to each item in the in-basket

task. Once the study protocol, Performance Feedback Checklist, and Scoring Decision Aid were reviewed, research assistants were required to conduct practice trials of the experiment to gain practice with the checklist and scoring. To ensure that research assistants reach acceptable levels of interrater agreement, the research assistant's scores on the in-basket task had to have at least 90% agreement with the trainer's score.

### *Independent Variables*

*Motivational Orientation.* Goal orientation was manipulated to prime participants to either take on a mastery orientation or performance-approach orientation (APPENDIX H). To induce a state of mastery-orientation, they were asked: *“Describe a situation in which your intellectual curiosity motivated you to acquire knowledge or gain a new skill about something meaningful to you. This is an instance in which your passion for mastering a skill/ task caused you to practice until you got better.”* To induce a state of performance-approach orientation, they were asked: *“Describe a situation in which your primary motive was to compete with, and outperform others so as to create a positive impression of yourself in others.”* To ensure that motivational orientation was salient, they were asked to: 1) detail the situation on a piece of paper and 2) verbally describe to the administrator the situation that was chosen.

*Goal Pursuit Strategies.* Regulatory fit was achieved via the type of feedback provided to participants, and this influenced which goal pursuit strategies (APPENDIX I) were used. Learning goal pursuit strategies were manipulated by framing the feedback to emphasize learning and information acquisition. Specifically, participants were given the following instructions prior to receiving feedback to ensure their use of learning goal pursuit: *“As you know, I have been reviewing your responses to the materials. Based on my assessments, I'm going to give you feedback that will help you learn to do this task better.”* Additionally, feedback

suggestions provided for each of the six managerial dimensions were framed as learning strategies; for example, feedback for the Prioritize Issues dimension will be framed as: *“To learn prioritizing, make sure to ignore issues that are non-time sensitive.”*

Competitive goal pursuit strategies were manipulated by framing feedback to emphasize performance and accomplishment. Specifically, participants were given the following instructions prior to receiving feedback to ensure their use of competitive goal pursuit: *“As you know, I have been reviewing your responses to the materials. Based on my assessments, I’m going to give you feedback that will help you better demonstrate your managerial skills compared to other participants.”* Feedback strategies provided for each of the six managerial dimensions framed as competitive strategies followed format similar to this example: *“Use these tips to help you perform better than other participants.”*

#### *Pilot Study*

A pilot study was conducted to test the proposed goal orientation and goal pursuit strategies manipulations. The pilot study was identical to the experimental study detailed above. There were approximately 20 participants who completed the pilot study. The pilot study was conducted to confirm that: 1) participants understood the in-basket task and 2) manipulations accurately represented goal orientation and its associated goal pursuit strategies. Additionally, the pilot study helped research assistants to get acquainted with running this study, and it helped to gather information about participants’ reactions to the manipulations and feedback framing.

#### *Self Monitoring*

This eighteen-item measure categorizes individuals as high or low self-monitors. Participants rate each item as True or False; the scores are then summed up to determine level of self-monitoring. Out of a total score of 18, if the participant score above 11, they are likely to be

high self-monitors. If the participant scores below a 10, they are likely to be a low self-monitor. This measure exhibits a Cronbach's  $\alpha$  of .70 (Snyder & Gangestad, 1986).

#### *Covariates*

*Number of Feedback Recommendations.* As participants were all given individualized, corrective feedback, participants received differing amounts of feedback. The number of feedback messages received likely has an effect on: 1) the amount of feedback utilized and 2) the number of feedback statements recalled. More specifically, when a participant received a greater number of feedback statements (as compared to another participant), they had a higher opportunity to use and recall that feedback. Thus, the number of feedback recommendations was included as a covariate.

#### *Dependent Variables*

*Use of Feedback.* Feedback utilization use was operationalized as: 1) frequency of feedback, or the number of times participants performed behaviors associated with feedback recommendations, and 2) variety of feedback, the number of different feedback behaviors performed by participants. Frequency and variety of feedback use was measured for session two of the in-basket, not session one.

*Feedback Recall.* Following the second segment of the in-basket task, participants were asked write down as many of the provided feedback recommendations as they could recall. Only recommendations that were specifically provided by the administrator after segment one will count toward the number of recommendations recalled.

*Filler Task.* The filler task was administered immediately after providing participants with feedback recommendations following segment one of the in-basket task. The primary purpose of the filler task was to ensure that recall of feedback recommendations was not due to rote



memorization but rather as a result of regulatory fit. The filler task was a memory recall task that increased cognitive load. The memory recall task lasted 4 minutes; first, participants were shown 40 words over 2 minutes, and the final two minutes was allotted to allow the participants to write down as many words as many words as they could remember from the 40 word set.

### *Analyses*

Descriptives and correlations were first conducted on the measured variables (number of recommendations given, variety of behaviors, frequency of behaviors, total variety, total frequency, and recommendations recalled). A 2 (Motivational Orientation: Mastery/ Performance [MO]) x 2 (Feedback Framing: Learning/ Competitive [FF]) ANOVA was conducted to determine whether there were any group differences (between the four conditions) for the number of feedback recommendations given. Additional manipulations check ANOVAs were carried out.

The fit hypotheses for feedback utilization and recall will be tested using a 2 (MO) x 2 (FF) ANCOVA, using number of feedback recommendations as a covariate. Contrasts were also run to test for significant effects of goal orientation and feedback framing. Finally, exploratory analyses were conducted to investigate the effects of the three-way interaction between self-monitoring, motivational orientation, and goal pursuit.

## Results

### *Coding Behaviors*

Two research assistants and I counted variety, frequency, and feedback recall. Each case had two raters rating the second session. Session two was always scored by coders who did not administer the experiment to the participant. In cases of disagreement, an independent third person, I or my advisor Dr. Hauenstein, determined the final value. For variety, raters showed

perfect agreement for 42 participants; only 2 of the discrepancies were of a magnitude greater than 3. For frequency, raters showed perfect agreement for 25 participants; 15 of the discrepancies were greater than a magnitude of 3. For recall, raters exhibited perfect agreement for 84 participants; there were no discrepancies with a magnitude greater than three.

### *Descriptives and Correlational Statistics*

The participant breakdown for each condition was: mastery-learning (n=27), mastery-competitive (n=25), performance-learning (n=28), performance-competitive (p=27). Descriptive statistics are reported in Table 1. Table 2 displays the correlation matrix for all dependent variables, collapsed over conditions. Tables 3 and 4 display the correlation matrix for all variables within each condition.

### *Preliminary Analyses*

As expected, the correlation of feedback recommendations with both variety ( $r = -0.35$ ) and frequency ( $r = -0.21$ ) were significant (see: Table 2), justifying the use of feedback recommendations given as a covariate. A 2 (MO) x 2 (FF) ANOVA was conducted to determine whether there were any significant differences in the number of feedback recommendations provided between the four study conditions. No significant differences in the number of feedback recommendations given were found. Also, covariate (number of feedback recommendations) by experimental factors (MO and FF) interactions were tested for each dependent variable; none of the factor by covariate interactions were significant.

### *Hypothesis 1: Behavior Utilization*

Hypothesis 1 predicted individuals in a state of fit (mastery-learning, performance-competitive) would exhibit greater behavior utilization of feedback. To test this hypothesis, two 2 (MO) x 2 (FF) ANCOVAs were conducted on variety and frequency of behaviors based on

feedback using feedback recommendations given as a covariate (see: Table 5). For variety, neither main effect was significant; however, the interaction term (MO x FF) approached significance ( $F(1,102)=2.83, p<.10, \eta_p^2=0.03$ ). As seen in Figure 1, the pattern of means produced the predicted cross-over interaction. However, further simple effects analyses indicated that the only significant contrast was the effect of feedback framing within the performance MO condition ( $F(1,101)=3.78, p<.05, \eta_p^2=0.04$ ). In the performance condition, participants with the competitive feedback framing exhibited a significantly greater variety of behaviors ( $M=5.98, SE=.46$ ) than those with the learning feedback framing ( $M=4.72; SE=.44$ ). In the mastery condition, individuals with the learning frame ( $M=5.46; SE=.45$ ) exhibited only a marginally greater variety of behaviors as those in the competitive frame ( $M=5.17, SE=.47$ ). For frequency of behaviors, neither main effect was significant; the MO x FF interaction term once again approached significance ( $F(1,102)=3.58, p<.10, \eta_p^2=0.03$ ). This cross-over interaction can be seen in Figure 2. All effects were in the predicted direction, but none of the simple effects analyses reached significance ( $p < .05$ ).

#### *Hypothesis 2: Recall of Recommendation*

Hypothesis 2 predicted that individuals in fit conditions would recall greater numbers of the feedback recommendations provided prior to session two, as compared to individuals in the non-fit conditions. The ANCOVA revealed that neither the main effects nor the interaction effect was significant (see: Table 6). Examining the within cell correlations (see: Table 3 & 4) the correlations between recall and frequency was modest to strong for all conditions. For variety, the correlations with recall were modest to strong, except in the Performance-Learning non-fit condition ( $r = .10$ ).

#### *Self-Monitoring*

The relationship between self-monitoring, motivational orientation, and self-monitoring was explored. It was expected that high-self monitors would be more sensitive to the receipt of competitive goal pursuit strategies, as it would provide them with the information they need to promote a positive self-image. This effect would further be strengthened for individuals in a state of performance orientation. To test these effects on the dependent variables, the following independent variables were included in the regression model: recommendations given, motivational orientation, feedback framing, and self-monitoring (see: Table 7). The analyses to test the relationship between self-monitoring and regulatory fit were underpowered; thus, a less stringent significance cutoff ( $p < .10$ ) was used to interpret these results.

The first regression model contained all the main effects. The second regression model contained all main effects variables as well as the interactions between motivational orientation and feedback framing (MO x FF), self-monitoring and feedback framing (SM x FF), self-monitoring and motivational orientation (SM x MO), and recommendations given and self-monitoring (RG x SM). The third regression model added the three-way interaction (MO x FF x SM) to the second model.

For variety, the regression effect for the third regression model ( $F(9, 97) = 2.48, p < .05$ ) was significant and accounted for approximately 11% of the variance. For variety, self-monitoring x recommendations given was significant, though this is unimportant because it does not inform the relationship between self-monitoring and regulatory fit. The effect of self-monitoring on variety approached significance ( $p < .15$ ) such that low self-monitoring was associated with greater variety, though this was unexpected since the relationship between self-monitoring and variety was very weak ( $r = .08$ ). None of the interaction effects between self-monitoring and regulatory fit were significant for frequency or recommendations recalled.

## Discussion

In the context of feedback utilization, this study aimed to test the generality of regulatory fit to goal orientation. Overall, the behavior utilization results indicated support for regulatory fit as a general principle in that fit patterns were observed goal orientation.

### *Hypothesis 1: Behavior Utilization*

Hypothesis 1 was partially supported. For both variety and frequency, the interaction between motivational orientation and feedback framing approached significance, indicating individuals in the fit conditions overall exhibited greater variety and frequency of recommended behaviors (see: Figures 1 and 2).

Lack of statistical power is the most likely explanation for the failure to reach the traditional significance probability. Two post-hoc power analyses were conducted to determine the power of the observed fit effects for variety and frequency of feedback behaviors. The initial a priori power analysis was conducted using a predicted interaction effect size of 0.28. For variety of behaviors, the observed interaction effect was  $f=0.23$ ; thus, the post hoc analysis indicated that the power was only at 0.65, confirming that the test was underpowered to detect effects for variety of behaviors. For frequency of behaviors, the observed interaction effect was  $f=.27$ ; power was 0.79 and thus was at minimal acceptable power for detecting effects.

An independent-samples t-test was conducted to compare overall fit versus non-fit for variety and frequency of feedback behaviors. Results indicated that there was a significant difference between fit and non-fit conditions for variety ( $t=2.15$ ,  $p<.05$ ) and frequency ( $t=2.20$ ,  $p<.05$ ) of feedback behaviors exhibited. These results suggest that regulatory fit did have an effect on behavior utilization of feedback, such that individuals in a state of fit, on average, performed greater variety and frequency of feedback behaviors, as compared to individuals in a

state of non-fit.

### *Hypothesis 2: Recall of Recommendation*

No effects were found for recommendation recall. On average, approximately 15 recommendations were provided for each participant, and participants recalled an average of 3 recommendations (20% of the average recommendations given). Participants were asked to recall feedback recommendations after performing both segments of the in-basket task, approximately one hour into the experiment. It is possible that participants lost motivation at the end of the experiment.

The overall relationship between recall and behavioral manifestations of feedback is moderately significant (variety:  $r=.30$ ,  $p<.01$ ; frequency:  $r=.39$ ,  $p<.01$ ), indicating that recall and behavior utilization are linked. The within-cell correlations between recall and variety/frequency are moderate to high for all conditions with the exception of variety in performance-non-fit condition ( $r = .10$ ). For recall, perhaps regulatory fit manifests more through correlations between recall and behavioral utilization than fit effects on recall means.

### *Goal Orientation*

Individuals in a state of mastery or performance orientation have different primary objectives, such that individuals in a mastery-oriented state are concerned with gaining new information and learning new skills, whereas individuals in a performance-oriented state are focused on projecting a positive impression of themselves (Elliot 2005). These motivational orientations should influence how individuals approach feedback. Individuals adopting a state of mastery orientation will generally find feedback helpful, whereas those in a state of performance orientation will likely not recognize the utility of feedback; this can help to explain the differences seen in feedback utilization between mastery and performance conditions.

In the current study, participants in a state of mastery orientation were less affected by feedback framing. There are two possible explanations for this result. First, the most parsimonious explanation is lack of power. It's possible that issues of low power are plaguing these analyses, leading to lower effects overall for those participants in a state of mastery orientation. Second, it is also plausible that the results for mastery orientation exhibit lower fit effects because overall, individuals in a state of mastery orientation tend to see the utility of feedback. Previous research has indicated individuals in a state of mastery-orientation actively seek out and place higher value on feedback. Thus, it appears that feedback benefits individuals who are in a state of mastery orientation regardless of how it is framed, because they will view any feedback as likely to provide them with the proper information to change their efforts to succeed at the task. Further, mastery orientation is associated with higher persistence for tasks (VandeWalle et al., 2001); therefore, regulatory fit may influence individuals less in a state of mastery orientation.

Research has indicated that individuals in a state of performance orientation place limited value on feedback (Tuckey et al., 2002) and will likely not recognize the utility of provided feedback (Whitaker and Levy, 2012). This suggests individuals in a performance-approach state will be less affected by feedback framing. I argue that feedback, and fit, will be important to individuals in a state of performance orientation, since they are concerned with impression management (Tuckey et al., 2002).

Whether individuals in performance-oriented state will utilize feedback recommendations depends on if they recognize the utility of feedback. Whitaker and Levy (2012) posit that since individuals in a state of performance orientation view ability as stable and fixed, they will not recognize utility of feedback, and therefore, will not exhibit feedback utilization behaviors.

However, I argue that if performance-oriented individuals recognize that feedback can be useful to help them with a specific goal, such as impression management, they will be more likely to utilize feedback recommendations. My findings suggest that individuals in a performance-oriented state recognized the utility of feedback. It's clear that the framing of feedback provided was paramount to feedback utilization. Feedback framing had a stronger effect on individuals in a state of performance orientation as opposed to mastery orientation. Further, individuals in the performance-learning condition were least likely to utilize feedback, as they may not have perceived learning-framed feedback to be helpful. Alternatively, performance-oriented individuals who received competitive-framed feedback were most likely to utilize feedback recommendations; it is possible that this is because they viewed feedback as useful enough to utilize to compete with others to project a positive image. Thus, the specificity and the framing of the feedback helped individuals in a state of performance orientation to recognize the utility of the feedback to help them with their primary goal of impression management.

The relationships between performance goal orientation and outcomes have been unclear, which led to the bifurcation of performance orientation into performance-approach and performance-avoid orientations. The relationships between performance-approach orientation and performance outcomes show great variability (Elliot & Church, 1997). Regulatory fit can help explain why the relationship between performance-approach and outcomes is weak. It is possible that the relationships seen with performance-approach orientation remain unclear in the current literature because we are not ensuring that individuals in a state of performance approach orientation are in a competitive frame. The results from this study indicated strong relationships between performance-approach orientation and performance (specifically behavior utilization of feedback), indicating that regulatory fit may be the key to conceptualizing how to motivate



individuals in the performance-approach orientation. Thus, it is important to consider the match between goal pursuit and motivational orientation, specifically for individuals in a state of performance-approach orientation.

This study examined the utilization of corrective task feedback as a function of regulatory fit between state goal orientation and feedback framing. The results suggest that going forward, goal orientation research will benefit from integrating the principle of regulatory fit, especially in relation to understanding the effects of performance-approach motivational orientation. Furthermore, the effects of regulatory fit should be replicated with chronic goal orientation (Miller & Hauenstein, 2013).

### *Self-Monitoring*

Relative to low self-monitors, high self-monitors were expected to be more influenced by situationally-induced regulatory fit, because high self-monitors are more sensitive to environmental cues (Leary & Kowalski, 1990). The results showed that the main effect for self-monitoring approached significance (for variety of feedback behaviors) but not in the direction I expected. Low self-monitors showed more variety of feedback behaviors than high self-monitors. This result could possibly be explained by the significant interaction between recommendations given and self-monitoring ( $t=1.69$ ,  $p<.10$ ). This interaction effect suggests that there is a difference between high self-monitors and low self-monitors in their level of engagement toward the task in the first segment. There seems to be a certain degree of predictive validity for self-monitoring in engaging in the in-basket task. Low-self monitors exhibited greater variety of behaviors in the second segment of the in-basket task; this could be because they already had a higher level of engagement toward the task.

The following effects must be interpreted with caution, as the analyses were

underpowered. The main effect of motivational orientation and the interaction effect between self-monitoring and motivational orientation were also not significant indicating that high self-monitors were not influenced by motivational orientation. Rather, it appears that self-monitoring does not significantly differ between different goal orientations. The findings suggest that the effect of self-monitoring is negligible between states of fit versus non-fit, as indicated by the non-significant interaction between self-monitoring and regulatory fit. In this study, self-monitoring was measured as a trait, whereas goal orientation was manipulated and measured as a state. Although fit effects have been shown to be equally robust across chronic and situational contexts (Keller & Bless, 2006), it's possible that we may see different interactions between self-monitoring and *trait* goal orientation.

It's important to note that, because of low power, it is not possible to know the extent to which these inferences hold true for other samples. Further, due to low power, the effects of self-monitoring and fit could not be fully explored. Thus, more research on this relationship could prove beneficial, specifically for strengthening the behavioral outcomes seen for individuals in a state of a performance orientation.

### *Feedback Utilization*

The present study extends the current literature on feedback utilization by providing further evidence for the positive effects of regulatory fit on behavioral utilization of feedback. This is the third study by Hauenstein and colleagues that has found regulatory fit in the utilization of corrective feedback. Using the same experimental protocol, Holmes and Hauenstein (2012) found regulatory fit effects between regulatory focus motivational orientation and eager versus vigilant goal pursuit framing. Similarly, Miller and Hauenstein (2013) showed fit effects between chronic regulatory focus and state regulatory focus, i.e., fit effects were

stronger when chronic preference matched the regulatory focus state. Holmes and Hauenstein (2012) and Miller and Hauenstein (2013) both used regulatory focus as the motivational orientation variable from which to study regulatory fit. The current study tests the generality of regulatory fit on utilization of corrective feedback when using goal orientation.

The consistency of these findings suggest regulatory fit may explain the observed variability in the utilization of task feedback i.e., individuals are more likely to use feedback when regulatory fit is sustained, and the manner in which feedback is framed is an important aspect of sustaining regulatory fit.

### *Conclusion*

The present study sought to extend the literature on regulatory fit and feedback utilization. The fit effects between goal orientation and feedback framing lent support to the assertion that regulatory fit is a general principle that can be used with any motivational orientation. Individuals in this state of regulatory fit exhibited greater behavioral manifestations of provided feedback. In terms of application of the current research, if supervisors understand that different employees are motivated by different classes of goals, they will be better able to work with individual employees to provide tailored feedback that will increase behavioral utilization of feedback. Further research is needed to: 1) understand how chronic goal orientation can impact the influence of fit within the feedback utilization context, 2) understand the full effect of regulatory fit over prolonged periods of time and across different tasks within the workplace, and 3) understand the relationship between self-monitoring and regulatory fit and its effect in the feedback utilization context.

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## APPENDICES

## APPENDIX A

## INFORMED CONSENT FORM

## VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

## Informed Consent Form for Participants of Investigative Projects

Title of Project: Examining Managerial Potential: Task Performance and Feedback  
Investigators: Dr. Neil M. Hauenstein, Nikita Arun

**I. Purpose of this Research/Project**

The purpose of this study is to examine supervisory potential using. The results of this study will have practical importance for organizations understanding the relationship performance and feedback, and will be made available to those interested in this topic upon request.

**II. Procedures**

You will be introduced to a business management simulation task. You will then be asked to complete this simulation task (50 minutes) and fill out several questionnaires (25 minutes). In all, the total time required to complete this experiment will be approximately 75 minutes.

**III. Risks**

There are no more than minimal risks involved in participation in this study.

**IV. Benefits of this Project**

The information obtained by this research may be used for scientific and/or educational purposes. The information relating to responses of all participants may be presented at scientific meetings and/or published in professional journals or books. This information may be used for any other purpose, which Virginia Tech's Department of Psychology considers proper in the interest of education, knowledge, or research. If you are interested in obtaining results of this study they will be made available to you upon request. No guarantee of benefits has been made to induce you participate.

**V. Extent of Anonymity and Confidentiality**

The results of this study will remain strictly anonymous. At no time will the researcher release the results of this study to anyone, other than those individuals involved with the research project. You will not be required to identify yourself in any manner on the survey instrument, nor will you be required to divulge any of your answers to anyone.

**VI. Compensation**

Undergraduate students will be compensated for participating in the present study by receiving 2 points of extra credit towards their Introduction to Psychology or other psychology class final grade. If you choose not to participate in this study, you have the option of writing essays for extra credit. If you are enrolled in Introduction to Psychology, please see the Introductory Psychology Office (Williams 307) for details. All others should see their instructor for other extra credit options.

**VII. Freedom to Withdraw**

You may withdraw from participation in this study at any time without penalty. If you choose to withdraw from this experiment you will not be penalized in extra credit points or grade in a course. You are free not to answer any questions without penalty.

#### VIII. Approval of Research

This research has been approved, as required, by the Human Subjects Committee of the Psychology Department and by the Institutional Review Board for Research Involving Human Subjects at Virginia Tech.

#### IX. Subject's Responsibility

I voluntarily agree to participate in this study.

#### **X. Subject's Permission**

I have read and understand the Informed Consent and the conditions of this project. I have had all my questions answered. I hereby acknowledge the above and give my voluntary consent.

If I participate, I may withdraw at any time without penalty.

NAME (PLEASE PRINT): \_\_\_\_\_ DATE: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

Should I have any pertinent questions about this research or its conduct I may contact:

Investigator: Nikita Arun, 847-924-8959/ [narun528@vt.edu](mailto:narun528@vt.edu)

Investigator: Dr. Neil M. Hauenstein, 540-231-5716/ [nhauen@vt.edu](mailto:nhauen@vt.edu)

Chair, HSC: Dr. David W. Harrison, 540-231-4422/ [harriso@vt.edu](mailto:harriso@vt.edu)

Chair, IRB: Dr. David M. Moore, 231-4991/ [moored@vt.edu](mailto:moored@vt.edu)



## APPENDIX B

## DEMOGRAPHICS QUESTIONNAIRE

Instructions: Please answer the following questions by writing your answer or indicating the appropriate option.

Age: \_\_\_\_\_

Sex

Male  
 Female

Ethnicity

Caucasian  
 African American  
 Hispanic  
 Asian  
 Native American  
 Other

Academic Standing

Freshman  
 Sophomore  
 Junior  
 Senior

## APPENDIX C

### WHAT IS AN IN-BASKET TASK?

Work simulations are exercises that present an individual with a job-related situation. Examples include: in-basket tasks, role playing, etc. These simulations are created using tasks from an actual job role and is used to gauge how an individual will behave in that specific work situation. This study will utilize the in-basket task.

This in-basket task is a simulation exercise that will place you in the role of a manager of a manufacturing company. You will be provided with background information on a fictitious organization (e.g., the Geometric Company) and will be asked to imagine that you are a manager in this company. You will be given a set of memos, letters, requests, etc. that you will have to read and decide how best to respond. The memos and letters that you will have to attend to are kept in the "in-basket" and once you finish addressing a memo, you will put it in the "out-basket," so that it can be scored by the administrator.

*This task is generally used by organizations for selection and promotion decisions.* For example, an in-basket task may be administered to all job candidates, and performance on the task will be used in consideration for filling a position.

In-basket tasks are generally timed so that it adequately simulates a work environment in which deadlines are imminent. This exercise will be split up into two segments. The first segment will last 15 minutes, the second 20 minutes.

#### **Example on how organizations use work simulations:**

Organizations firms sometimes use case studies for hiring decisions. Applicants will receive a case on which they must work. Here, the organization is trying to mimic the work environment in which their employees currently work to determine whether the applicant can perform well under similar circumstances. So, their performance on how they handle the case study will determine their future employment at the firm.

## IN-BASKET TASK INSTRUCTIONS

### The Scenario:

For the purposes of this exercise, you are to assume the role of Morgan Judd, plant supervisor of the Southern Division at the Geometric Manufacturing and Development Company. The Geometric Company has just promoted you to the role plant supervisor. Your company does research and developmental work in the area of atomic-powered engines and also produces a number of different engines for commercial use. Although you have worked in this new position for some time, you have had a number of other responsibilities that have kept you away from your office for a good deal of the time.

Today is Sunday, July 11<sup>th</sup>. The situation is obviously hypothetical, but you are to work just as you would if you should find yourself in a similar situation in the future. The problems are real, obtained from actual situations supervisors have encountered on their jobs.

You have to leave your “office” promptly in 35 minutes to catch a plane for an important meeting, which you had committed yourself to attend before you learned of your appointment to your present position. You will be very busy during the meeting and *will not be able to take along anything to work on*. This meeting will keep you away both Monday and Tuesday. You are working on Sunday afternoon because you want to take care of anything that might need your attention before Wednesday. You do not have access to any computer or phone, and your cell-phone does not have service in the building.

Now that you have a brief background for your new position, you are ready to go on with the exercise. Remember:

- The day is Sunday, July 11.
- You are Morgan Judd.
- You cannot reach anyone for help.
- All of the files and the computer terminal are locked and you do not have access. You must work with the materials at hand.
- You have 35 minutes.
- You will be gone Monday and Tuesday.
- You cannot take any of these materials with you on your trip.

Your materials consists of:

- 1) An organizational chart,
- 2) A calendar, and
- 3) An in-basket containing the materials that your secretary, Jane Butler, has left on your desk for your attention.

The in-basket materials include letters, reports, memos, etc. This in-basket simulation task is commonly used in organizations to make hiring and promotion decisions.

**Example Memo:**

## The Geometric Company

## INTER-OFFICE MEMORANDUM

July 8, 2011

To: Will Judd  
From: Brookes Felton  
Subject: Safety Inspection

I want to give all of the plant supervisors a heads up regarding the state safety inspector who will be visiting the production plant three months from now on October 7th. Please review the state safety guidelines and ensure that all of your employees are in compliance.

*Brookes Felton*

**Your Task:**

Your task will be go through these materials and take care of any problems/ issues presented; you will have 35 minutes to get through as much as you can.

To ensure a high score on the in-basket task, **document in writing everything you decide or do**. Please indicate on each item why you are taking the steps you have chosen and what you hope to accomplish. You are requested to write down everything you decide or do. The bottom of each memo is left blank to provide you with enough room to record this information.

When documenting your notes, you can:

- Make memos to yourself about things you want to do when you get back.
- Draft letters or emails, if appropriate, for your secretary to prepare.
- Record (in the form of notes) what you will say on the phone, and say directly to your secretary and others, and what your intentions are as well as your actions.
- Note agenda for meetings you may want to call.
- Sign papers if appropriate.

Everything you decide or do should be documented in writing. Many of things normally would be handled more informally, but it is Sunday, you are new in your job, and you will be out of town for the next two days.

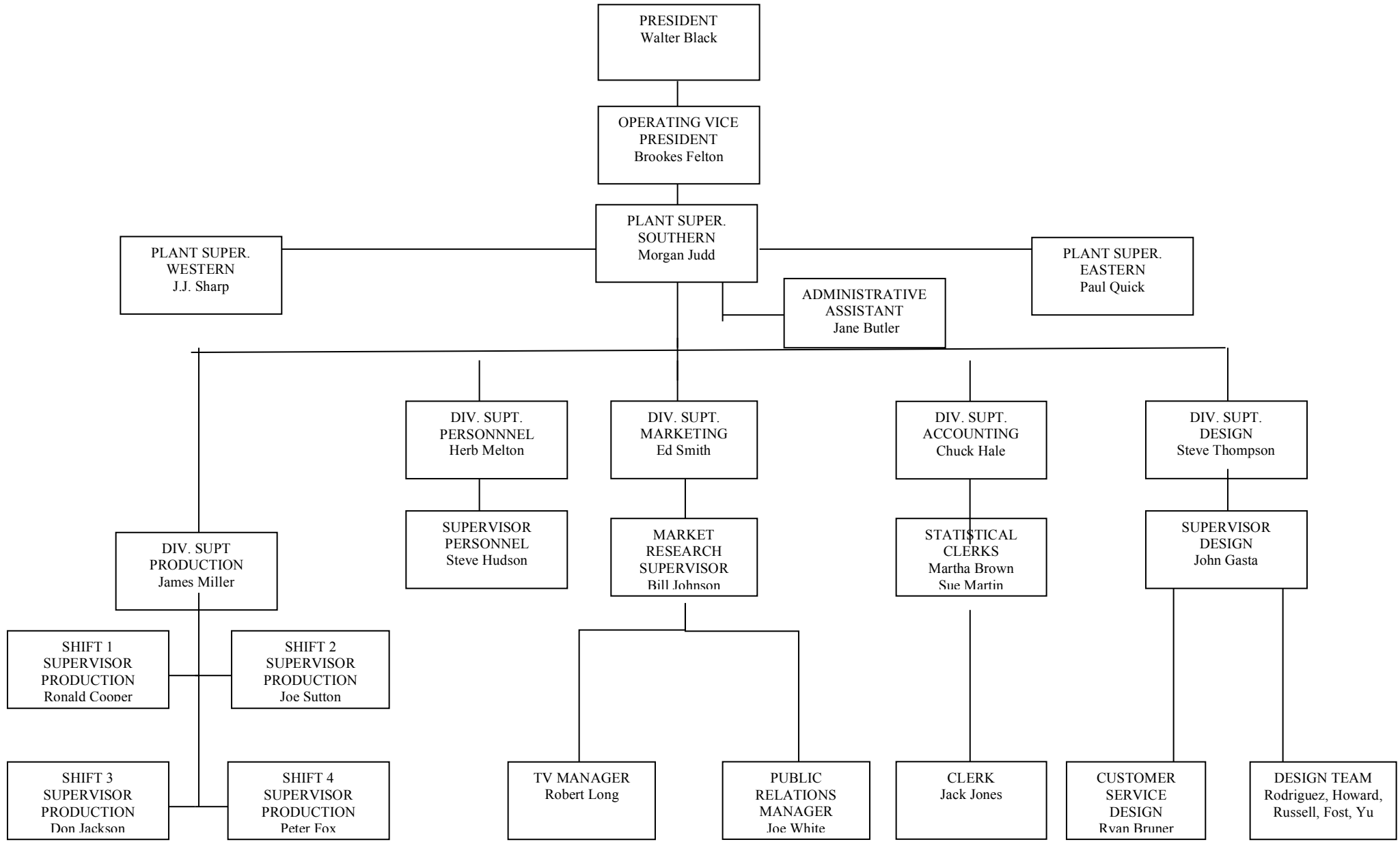
**Purpose of Task:**

I'll be reviewing and scoring at the notes you make based on certain managerial dimensions. With this information, I'll generate some feedback, which we'll go over in about 20 minutes. We are mainly interested in looking at how you score compared to other students in your demographic.

Following these guidelines will provide you with an opportunity to develop your skills and gain experience on the in-basket task. This task may be helpful to you in your future job, as gaining these skills now can help give you an edge over others with regard to hiring and promotions.

<b>July</b>						
<b>Sunday</b>	<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>	<b>Saturday</b>
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

## ORGANIZATION CHART THE GEOMETIC COMPANY



July 2,

To: Will Judd

From: John Pushing

Dear Mr. Judd,

I'm going to be visiting clients in your area on July 16<sup>th</sup> to discuss our newest line of production machinery and I would love to have the opportunity to stop by and talk with you about the advantages that our newest products have to offer.

Would you be available to meet with me on the morning of the 16<sup>th</sup> from 9:45 a.m. to 11:00 a.m.? Please let me know at your earliest convenience.

Sincerely,

*John Pushing*

Regional Sales Manager

Acme Manufacturing Equipment Company



# The Geometric Company

## INTER-OFFICE MEMORANDUM

July 8, 2013

To: Will Judd  
From: Chuck Hale  
Subject: Employee of the Month

Will,

Just wanted to let you know that our very own Sue Martin was named employee of the month, not just for the Southern plant, but for the entire company! Sue has done a fantastic job here at Geometric Company for over 10 years and consistently earns 'excellent' performance ratings. Just thought you might like to know.

Sincerely,

Chuck Hale

# The Geometric Company

## INTER-OFFICE MEMORANDUM

July 8th, 2013

To: All Southern Plant Employees

From: Herb Melton

Just wanted to let everyone know that we will be celebrating August birthdays on August 30<sup>th</sup> at 12:00 p.m. in the plant break room. We will be having cake and ice cream to celebrate, so be sure to come and join us!

Thanks,

Herb Melton

# The Geometric Company

INTER-OFFICE MEMORANDUM  
**MONTH OF JUNE**  
PROFICENCY RATING OF NON-MANAGEMENT PERSONNEL

<u>Name</u>	<u>Rating</u>
Cooper	Poor
White	Excellent
Sutton	Poor
Long	Good
Jackson	Poor
Martin	Excellent
Gasta	Good
Fox	Poor
Bruner	Poor
Melton	Good
Johnson	Good
Hale	Good
Smith	Excellent
Hudson	Poor
Jones	Good
Thompson	Good
Brown	Good
Miller	Excellent
Rodriguez	Good
Howard	Good
Fost	Good
Russell	Good

# The Geometric Company

125 Anderson Street  
Allandale, New York

July 10, 2013

To: Will Judd  
From: Herb Melton  
Subject: Personnel

Please let me have this form back at your earliest convenience. I've been having a look over your people and I want to promote Joe Sutton to that foreman's opening and I need your signature.

*Herb Melton*

I recommend the promotion of Joe Sutton to Foreman.

---

Plant Supervisor

The Geometric Company  
INTER-OFFICE MEMORANDUM

July 2, 2013

To: Will Judd  
From: Joe White  
Subject: Community Relations

Dear Will,

It has come to my attention that some of your people have been seen in some questionable areas of town. You know how important community relations are for us. I wish you would talk to some of them and straighten this out. Their names are:

Cooper

Sutton

Long

Jackson

Fox

To: Will Judd

From: John Simmons

Dear Mr. Judd:

I'm writing to you in regards to Ryan Bruner. Though the quality of the work that your design team has produced for us in the past has always been of the highest quality, my interactions with Mr. Bruner over the past several months have been highly contentious. He has been very curt in his communications with us and becomes very defensive whenever we present him with requests for changes in the design plan. In several cases he even suggested that we don't know what we're talking about and has refused to make the changes we have requested of him.

Our firm has been doing business with The Geometric Company for over 7 years. On the whole we have enjoyed our relationship with your company. However, if this matter is not resolved ASAP I am afraid we will have to consider taking our business elsewhere.

*John Simmons*

John Simmons, President

BARTELSON COMPANY

# The Geometric Company

125 Anderson Street

July 9<sup>th</sup>, 2013

Will,

Let me be the first to congratulate on your new promotion. Leadership thinks you have a lot of potential and couldn't agree more.

I think it's imperative that we meet to discuss your new position as soon as possible. I want to give you an overview of what we expect from you and answer any questions you might have regarding your new responsibilities. This is a very important position and there is a lot of work that needs to be done.

I'm very busy this month and the only time I'm available is on July 16<sup>th</sup>. I'd like to meet with you from 9:00 a.m. to 11:00 a.m., so please be sure to stop by my office then.

*Brookes Felton*

July 2, 2013

Mr. Will Judd,

We think Mr. Miller is incapable of handling this issue, so we are bypassing him and coming directly to you. We the undersigned are strongly against the policy of giving merit bonuses. We think it is political, and an unfair way to bribe workers. We plan to take this up with the union unless it is stopped.

Sutton

Jackson

Fox

Cooper



# The Geometric Company

## INTER-OFFICE MEMORANDUM

To: J.J. Sharp, Paul Quick, Will Judd

From: Michael Thompson

Simplex will be testing the fire alarm systems in the following plants during the month of July 2013: Southern, Eastern, Western  
The fire alarm horns/speakers will be sounding and the strobe lights will be flashing at times during this testing.

July 6<sup>th</sup> –Southern

July 14<sup>th</sup> – Eastern

July 16<sup>th</sup>—Western

Please notify your people accordingly.

*Michael Thompson*

Geometric Company

Facilities Services/Building Systems Coordinator

The Geometric Company  
INTER-OFFICE MEMORANDUM  
ABSENCES DURING THE MONTH OF JUNE

<u>Name</u>	<u>Days</u>	<u>Name</u>	<u>Days</u>
Miller	0	Martin	1
Gasta	2	Jackson	6
Russell	3	Melton	0
Fox	1	Bruner	3
Hale	1	Johnson	2
Rodriguez	2	Smith	0
Hudson	1	Sutton	8
Jones	0	Brown	1
Thompson	1	Cooper	0
White	1	Howard	1
Fost	0	Long	2

# The Geometric Company

## INTER-OFFICE MEMORANDUM

Mr. Will Judd:

Below is the requisition form for that special drawing layout. It's expensive, but it's really a beauty.

*Steve Thompson*

I approve the special drawing layout.

---

July 2, 2013

Mr. Judd,

My wife and I have a garden at home and we seem to have more squash and zucchini than we know what to do with. I've left a grocery bag full of the extra squash and zucchini on the table in the break room. Could you please let the rest of the employees know that they are free to help themselves?

Thanks,  
*Simpson*

## City of Wilcox, Virginia

July 8, 2013

Plant Manager

Southern Area

The Geometric Company, Wilcox, Virginia

Dear Sir:

It is with great eagerness that we have looked forward to the completion of your plant. It will be a significant factor in the growth of the area. I would like to take this opportunity to welcome you and invite you to a meeting of the local business committee. Traditionally, we discuss topics of mutual interest, affecting local and national business, and use this as an opportunity to socialize—which, in your case, would afford an opportunity for you to meet with us. Looking forward to seeing you on Wednesday, the 14<sup>th</sup>, 7 p.m. at the Elks Club.

Cordially,

*W.W. Weston*

Mayor  
Wilcox, Virginia

July 8th, 2013

To: Will Judd

From: Peter Fox

I want to lodge a formal complaint regarding the vacation policy of this company. As a loyal employee of 15 years plus, I deserve more than two weeks of paid vacation, especially when you consider the fact that other employees with less than ten years of experience at Geometric are given just as much vacation time as I am! This is unfair and I plan to take the matter up with union if it's not addressed soon.

Peter Fox

# The Geometric Company

**Will,**

**Make sure you get your design team on this project right away. This needs to be taken care of immediately.**

**Brookes Felton**

FWD:

**WILKERSON COMPANY  
WILCOX, VIRGINIA**

July 7, 2013

Plant Superintendent, Geometric Company

Dear Mr. Judd:

Your handling of the design plans for my job has been very poor in my estimation. Your use of manpower has been especially faulty, and I am of the opinion that you don't use your people very effectively. Unless there is a substantial improvement, we may very well terminate your services and go to another company.

I am sending to you (on Monday) the specifications for the new designs which must be completed and received by Wednesday, 5 p.m.

Ed Lasting

Ed Lasting, President  
WILKERSON COMPANY

# The Geometric Company

## INTER-OFFICE MEMORANDUM

July 6, 2013

To: Will Judd  
From: Walter Black

Congratulations on your promotion. You are in an important job position and we have great faith in your ability to handle it. If there is anything I can do to be of assistance to you while you're getting settled please don't hesitate to ask. Oh, by the way, my wife and I would like you to join us for dinner on Wednesday, July 14, at our home. We'll expect you around 7 p.m. at the house, 419 West Haven drive.

*Walter Black*



# The Geometric Company

EASTERN DIVISION

INTER-PLANT MEMORANDUM

July 8, 2013

Mr. Will Judd:

Will, I'll need all of your design people from Monday until Thursday for a special work-up on the motor for the drainage system for the township of Allandale.

Thank you,

*Paul Quick*

# The Geometric Company

## INTER-OFFICE MEMORANDUM

July 7, 2013

To: Will Judd  
From: Brookes Felton

Will,

Just wanted to let you know that I met with Walter Black the other day and he mentioned how impressed he is with the performance of your plant, especially in regards to marketing. He has heard nothing but positive comments from members of the community in Wilcox regarding the new plant there. People seem to be genuinely excited and I'm sure our marketing team down there has a lot to do with that. Just thought you should know.

Keep up the good work!

*Brookes Felton*

# The Geometric Company

## INTER-OFFICE MEMORANDUM

July 8, 2013

To: Will Judd

From: J.J. Sharp

Will, I'll need those two design men on Monday and Tuesday to get the X-5507 engine job completed on time. I appreciate in advance your willingness to help.

J.J. Sharp

# The Geometric Company

June 29, 2013

To: All Supervisors

From: Brookes Felton

Subject: Production

I'm very proud of the job that has been done by all of the plants so far. As we know the economic decline has created a tremendous need for even greater productivity. I hate to ask, knowing what an excellent job we are already doing, but, if possible, let's see what we can do to make our excellent record even a little bit better and bail the company out of a tight spot. Let's each hit 50,000 units for July.

*Felton*

Western Branch:

Produced Units	Product Sales (\$)	Labor (\$)	Percent (%)
48,873	732,606*	\$156,045	21.3%

Southern Branch:

Produced Units	Product Sales (\$)	Labor (\$)	Percent (%)
45,692	683,923	\$159,291	23.3%

Eastern Branch:

Produced Units	Product Sales (\$)	Labor (\$)	Percent (%)
47,935	718,545*	\$142,272	19.8%*

*\*Meets or exceeds company goals.*

# The Geometric Company

## INTER-OFFICE MEMORANDUM

Mr. Will Judd:

I need your signature for our new T.V. ad campaign. Please provide your approval as soon as possible so that we can start up our need marketing push.

Bill Johnson

I approve the new T.V. ad campaign.

---

Southern Plant Supervisor

July 1, 2013

To: Mr. Will Judd  
From: Ronald Cooper, Don Jackson, Peter Fox  
Subject: Promotions

It seems as if those employees past 50 years of age are being bypassed for promotion in favor of so-called “potential management” but yet untried college people of about 30. Doesn't experience and years of faithful service deserve some consideration? We plan to take this up with the union unless we hear from you shortly about this policy.

# The Geometric Company

## TELEPHONE MEMO

July 8, 2013

Mr. Judd, Dr. Franz called regarding a 'vacuum tube'.

*Jane Butler*  
Administrative Assistant

# The Geometric Company

## INTER-OFFICE MEMORANDUM

July 2, 2013

Mr. Will Judd,

We have gotten air time on Channel 5 for a five minute interview with a supervisor of assembly line workers. I must have the name of the man in my office by July 15<sup>th</sup>. Let's have a pleasant looking, personable, and above all, upstanding individual. Somebody suggested Joe Sutton and unless I hear otherwise, I'll use him.

*Robert Long*

T.V. Manager



# The Geometric Company

## INTER-OFFICE MEMORANDUM

July 7th, 2013

The vacation of Jane Butler will commence July 13<sup>th</sup> through the 29<sup>th</sup>.

Approved by: \_\_\_\_\_  
Plant Supervisor

**WILCOX, VIRGINIA**

Wilcox Times

July 5, 2013

Mr. Judd

Geometric Company

Wilcox, Virginia

Dear Mr. Judd:

As Chairman of the highway beautification committee, I wish to thank you for making Don Jackson available to work on the committee. He has been an important factor in the success of the drives so far by his untiring and enthusiastic efforts.

The committee was especially pleased last week when Mr. Jackson assured us that the Geometric Company would make a \$1,500 contribution to this worthy project. It is nice to know that your company recognizes the value of community projects.

We plan to print an article in the Times on July 19th, announcing the corporate gifts to date.

Thank you again for your community spirit.

Sincerely,

E.E. West  
Editor, Wilcox Times

# The Geometric Company

## INTER-OFFICE MEMORANDUM

July 1, 2013

To: Will Judd  
From: Chuck Hale  
Subject: Accounting Program

Will,

It seems that one of our systems of accounting is antiquated. I met with Kyle Roberts over from the Eastern Plant who told me about a new system they recently implemented that would more effectively manage the way our transactions are handled and how the sources of shortages are pinpointed, and I believe it would really benefit us in the long run. I need your approval for purchasing the software, I can forward the information to you if you are interested.

Thank you,

Chuck Hale

I approve the decision to purchase Corlex Accounting Pro.

---

Southern Plant Supervisor

## **Allied Sheet Metal**

---

1204 EASTERN LAKE ROAD  
BEAUMONT, KANSAS

July 9, 2013

Plant Superintendent  
Geometric Company  
Wilcox, Virginia

Dear Sir:

The supplies promised for July 12 cannot be delivered. I sincerely regret the delay but a power breakdown has about paralyzed my operation. I will get the material to you just as soon as possible. Please bear with me.

Sincerely,

***Ed Hunter***

President, Allied Sheet Metal

P.S. If you could contact me on Monday I could let you know about some material being stored by the AAMCO Co. in Sanford, Virginia. If you need it very badly they might be able to loan you some, as the union strike has temporarily shut down their operation.

# The Geometric Company

## INTER-OFFICE MEMORANDUM

June 27, 2013

To: Will Judd  
From: Steve Hudson

Hey Will,

I have an employee who likes to clock out early and doesn't seem to realize the cost it has on our production. I have talked with her on numerous occasions but I feel she may be ignoring me. She has been reprimanded for it and has one step left, but she is really an exemplar worker, and I was hoping you could meet with her on this problem. I would greatly appreciate it as she respects higher level managers more.

Thanks greatly,

Steve Hudson

APPENDIX D  
SELF-MONITORING

Instructions: Please respond by indicating T if the statement describes you well and F if the statement does not describe you.

- I find it hard to imitate the behavior of other people. (R)
- At parties and social gatherings, I do not attempt to do or say things that others will like. (R)
- I can only argue for ideas which I already believe. (R)
- I can make impromptu speeches even on topics about which I have almost no information.
- I guess I put on a show to impress or entertain others.
- I would probably make a good actor.
- In a group of people I am rarely the center of attention. (R)
- In different situations and with different people, I often act like very different persons.
- I am not particularly good at making other people like me. (R)
- I am not always the person I appear to be.
- I would not change my opinions (or the way I do things) in order to please someone or win their favor. (R)
- I have considered being an entertainer.
- I have never been good at games like charades or improvisational acting. (R)
- I have trouble changing my behavior to suit different people and different situations. (R)
- At a party I let others keep the jokes and stories going. (R)
- I feel a bit awkward in public and do not show up quite as well as I should. (R)
- I can look anyone in the eye and tell a lie with a straight face (if for a right end).
- I may deceive people by being friendly when I really dislike them.

## APPENDIX E

## DEBRIEFING FORM

## VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

The study that you have just participated in is meant to examine how performance feedback information and recommendations for improving performance on relevant tasks in the future can most effectively be presented to individuals.

The data from this study do not contain any individuating information and your right to privacy is guaranteed if the results of this study become public. If you are confused about any aspect of this study, or would like to see the results of this study once completed, please feel free to contact either of the investigators listed below.

Thank you again for your participation. You may withdraw your data if you desire.

**WE ASK THAT YOU DO NOT SHARE THE DETAILS OF THIS STUDY WITH ANYONE, AS THIS MIGHT AFFECT OUR DATA.**

## Contact Information:

Investigator: Nikita Arun, 847-924-8959/ [narun528@vt.edu](mailto:narun528@vt.edu)

Investigator: Dr. Neil M. Hauenstein, 540-231-5716/ [nhauen@vt.edu](mailto:nhauen@vt.edu)

Chair, HSC: Dr. David W. Harrison, 540-231-4422/ [harriso@vt.edu](mailto:harriso@vt.edu)

Chair, IRB: Dr. David M. Moore, 231-4991/ [moored@vt.edu](mailto:moored@vt.edu)

## APPENDIX F

**Performance Feedback Checklist: Learning Frame**

**Actively Manage Information-** Adopt tactics that allow you to distill and organize the large amount of information presented. Tactics that will help you to develop your managerial skills include:

- \_\_\_\_\_ Taking notes
- \_\_\_\_\_ Highlighting important dates and information on the provided documents
- \_\_\_\_\_ Documenting meeting dates and times on the calendar

**Prioritize issues-** Recognize that not all issues are of equal importance. To ensure that you learn how to effectively prioritize issues, make sure you:

- \_\_\_\_\_ Prioritizing legitimate customer requests
- \_\_\_\_\_ Prioritizing requests from superiors
- \_\_\_\_\_ Ignore issues that are non-time sensitive

**Resolution of critical issues-** To make sure you learn how to effectively resolve critical issues, do the following:

- \_\_\_\_\_ Describe specific steps to solve critical problems
- \_\_\_\_\_ Designate who is responsible for success of the solution
- \_\_\_\_\_ Specify date(s) that you will personally revisit this issue with those involved
- \_\_\_\_\_ If issue involves a customer, specify what will be done to ensure customer satisfaction
- \_\_\_\_\_ Request further information if you cannot make an informed decision
- \_\_\_\_\_ Delay action if you need more information

**Resolve conflicting requests-** There will be instances in which one or more requests conflict with another request. To ensure that you are able to develop your managerial skills as a mediator, make sure you are:

- \_\_\_\_\_ Communicating to affected parties that there is a conflict
- \_\_\_\_\_ Providing a rationale regarding how the conflict will be resolved

**Efficient use of meetings-** Meetings are time consuming, but can be one of the most effective ways to solve problems. To ensure that you are learning how to effectively use meetings, employ these tactics:

- \_\_\_\_\_ Specifying all employees who will attend each meeting
- \_\_\_\_\_ Disseminating a meeting agenda to all attendees
- \_\_\_\_\_ Meeting with supervisors to discuss issues that exist at the divisional level
- \_\_\_\_\_ Using one-on-one meetings to address and individual employee issue
- \_\_\_\_\_ If meeting with a problem employee, be sure the employee's supervisor attends the meeting

**Effective Leadership-** A supervisor must be an effective leader. Use the following tactics to gain practice in effective managerial skills:

- \_\_\_\_\_ Inform subordinates that they should follow the chain of command
- \_\_\_\_\_ Solicit strategic advice from your boss
- \_\_\_\_\_ Solicit operational advice from other plant managers
- \_\_\_\_\_ Personally praise an employee who does something positive
- \_\_\_\_\_ Publicly recognize an employee or a team who does something outstanding
- \_\_\_\_\_ Hold employees accountable for poor performance
- \_\_\_\_\_ Are willing to say "no" if a request does not provide a tangible benefit
- \_\_\_\_\_ Delegate non-critical issues to a subordinate



## Performance Feedback Checklist: Competitive Frame

**Actively Manage Information-** Adopt tactics that allow you to distill and organize the large amount of information presented. Tactics that will help you outperform the other participants include:

- \_\_\_\_\_ Taking notes
- \_\_\_\_\_ Highlighting important dates and information on the provided documents
- \_\_\_\_\_ Documenting meeting dates and times on the calendar

**Prioritize issues-** Recognize that not all issues are of equal importance. To ensure that you maximize your performance, use these tactics to prioritize the information:

- \_\_\_\_\_ Prioritizing legitimate customer requests
- \_\_\_\_\_ Prioritizing requests from superiors
- \_\_\_\_\_ Ignore issues that are non-time sensitive

**Resolution of critical issues-** To make sure that you are better able to resolve issues as compared to other participants, do the following:

- \_\_\_\_\_ Describe specific steps to solve critical problems
- \_\_\_\_\_ Designate who is responsible for success of the solution
- \_\_\_\_\_ Specify date(s) that you will personally revisit this issue with those involved
- \_\_\_\_\_ If issue involves a customer, specify what will be done to ensure customer satisfaction
- \_\_\_\_\_ Request further information if you cannot make an informed decision
- \_\_\_\_\_ Delay action if you need more information

**Resolve conflicting requests-** There will be instances in which one or more requests conflict with another request. To ensure that you are able to adequately display your skills as a mediator during conflicts, make sure you are:

- \_\_\_\_\_ Communicating to affected parties that there is a conflict
- \_\_\_\_\_ Providing a rationale regarding how the conflict will be resolved

**Efficient use of meetings-** Meetings are time consuming, but can be one of the most effective ways to solve problems. To ensure that you maximize your performance, employ these tactics to use meetings effectively:

- \_\_\_\_\_ Specifying all employees who will attend each meeting
- \_\_\_\_\_ Disseminating a meeting agenda to all attendees
- \_\_\_\_\_ Meeting with supervisors to discuss issues that exist at the divisional level
- \_\_\_\_\_ Using one-on-one meetings to address and individual employee issue
- \_\_\_\_\_ If meeting with a problem employee, be sure the employee's supervisor attends the meeting

**Effective Leadership-** A supervisor must be an effective leader. To make sure you display your leadership skills and perform better than other participants, make sure you:

- \_\_\_\_\_ Inform subordinates that they should follow the chain of command
- \_\_\_\_\_ Solicit strategic advice from your boss
- \_\_\_\_\_ Solicit operational advice from other plant managers
- \_\_\_\_\_ Personally praise an employee who does something positive
- \_\_\_\_\_ Publicly recognize an employee or a team who does something outstanding
- \_\_\_\_\_ Hold employees accountable for poor performance
- \_\_\_\_\_ Are willing to say "no" if a request does not provide a tangible benefit
- \_\_\_\_\_ Delegate non-critical issues to a subordinate

## APPENDIX G

## SCORING DECISION AID

## Items 1 – 5 Shown

## Item #1 (Related to Item 8)

- Resolve Conflicting Requests
  - Communicate to affected parties that there is a conflict
    - Brookes Felton's request conflicts w/ sales rep. request to meet on the same date and time (item 8). Should let whomever they decide to turn down the reason for being unable to meet.
  - Provided rationale for regarding how conflict will be resolved. (4)
    - Should say why they either chose to meet with Brooks Felton or with sales rep.
- Prioritize Issues
  - Prioritize requests from superiors
    - Should choose to meet with Brookes Felton rather than sales rep.

## Item #2

- Prioritize Issues
  - Ignore issues that are non-time sensitive
    - This item should be placed aside as the deadline is too far away to be dealt with right now.

## Item #3

- Effective Leadership
  - Personally praise an employee who does something positive.
    - Write Sue Martin a personal note commending her excellent work or
    - Plan to meet w/ or call Sue Martin personally to commend her
  - Public recognition of an employee or a team who does something outstanding.
    - Send a note out to everyone in the plant or her area recognizing her outstanding performance.

## Item #4

- Resolution of critical issues
  - Specify what action(s) will be taken
    - This is a serious problem that needs to be followed up on. Should plan to meet with production personnel in the near future to see how things are going and if issues have been resolved.
  - Designate who is responsible for the success of the action
    - Should note that production supervisor needs to take care of issues in his division
  - Specified date(s) that you will personally revisit this issue with those involved.
    - Should set a specific date in the near future to meet with production personnel to see how things are going and if issues have been resolved.
- Efficient Use of Meetings
  - Meeting with supervisors to discuss issues that exist at the divisional level

- There are some serious performance issues in the production area that need to be addressed. Should meet with production supervisors to find out what is going on and get things sorted out.
  - Disseminating a meeting agenda to all attendees.
    - If meetings are scheduled, should plan an agenda, such as:
      - Why is chain of command being broken?
      - Why is performance low and absences high in production?
      - What are we going to do about this?
  - Specifying all employees who will attend each meeting
    - If meeting is scheduled, should make a list of who all they would like to attend the meeting.
- Effective Leadership
  - Soliciting strategic advice from your boss
    - Should try to meet with Brookes Felton to discuss production issues and get advice from him.
  - Soliciting operational advice from other plant managers
    - Should try to meet with other plant managers to discuss your issues and get suggestions from them on how to address this issue.

#### Item #5

- Resolve Conflicting Requests
  - Communicate to affected parties that there is a conflict
    - Need to be assertive in letting Herb Melton know that he has:
      - Made a bad decision
      - Violated the chain of command
      - Let him know that this is unacceptable.
  - Provided rationale for regarding how conflict will be resolved. (4)
    - Joe Sutton is a poor performer and somewhat of a trouble maker. The evidence from items 4, 9 and 11 suggest that this promotion should not be approved.
    - Should provide rationale to Herb Melton explaining why Joe Sutton should not be approved for promotion.
- Effective Leadership
  - Informing subordinates that they should follow the chain of command.
    - Need to let Herb Melton that he has violated chain of command by going above the production supervisors head to request a promotion for Joe Sutton.
  - Being willing to say “no” if a request does not provide a tangible benefit
    - The evidence from items 4, 9 and 11 suggest that this promotion should not be approved. Joe Sutton is a poor performer and somewhat of a trouble maker.

## APPENDIX H

## MOTIVATIONAL ORIENTATION MANIPULATIONS

## Mastery Goal Orientation:

- Describe a situation in which your intellectual curiosity motivated you to acquire knowledge or gain a new skill about something meaningful to you. This is an instance in which your passion for mastering a skill/ task caused you to practice until you got better.

## Performance-Approach Orientation:

- Describe a situation in which your primary motive was to compete with, and outperform others so as to create a positive impression of yourself in others.

## APPENDIX I

## GOAL PURSUIT STRATEGIES MANIPULATIONS

## Learning Goal Pursuit:

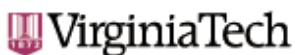
- As you know, I have been reviewing your responses to the materials. Based on my assessments, I'm going to give you feedback that will help you learn to do this task better.

## Competitive Goal Pursuit:

- As you know, I have been reviewing your responses to the materials. Based on my assessments, I'm going to give you feedback that will help you better demonstrate your managerial skills compared to other participants.

## APPENDIX J

## IRB APPROVAL FORM

**Office of Research Compliance**

Institutional Review Board  
 North End Center, Suite 4120, Virginia Tech  
 300 Turner Street NW  
 Blacksburg, Virginia 24061  
 540/231-4606 Fax 540/231-0959  
 email irb@vt.edu  
 website <http://www.irb.vt.edu>

**MEMORANDUM**

**DATE:** June 11, 2013  
**TO:** Neil M Hauenstein, Nikita Arun  
**FROM:** Virginia Tech Institutional Review Board (FWA00000572, expires April 25, 2018)  
**PROTOCOL TITLE:** Examining Managerial Potential: Performance and Feedback  
**IRB NUMBER:** 13-432

Effective June 10, 2013, the Virginia Tech Institutional Review Board (IRB) Chair, David M Moore, approved the New Application request for the above-mentioned research protocol.

This approval provides permission to begin the human subject activities outlined in the IRB-approved protocol and supporting documents.

Plans to deviate from the approved protocol and/or supporting documents must be submitted to the IRB as an amendment request and approved by the IRB prior to the implementation of any changes, regardless of how minor, except where necessary to eliminate apparent immediate hazards to the subjects. Report within 5 business days to the IRB any injuries or other unanticipated or adverse events involving risks or harms to human research subjects or others.

All investigators (listed above) are required to comply with the researcher requirements outlined at:

<http://www.irb.vt.edu/pages/responsibilities.htm>

(Please review responsibilities before the commencement of your research.)

**PROTOCOL INFORMATION:**

Approved As: **Expedited, under 45 CFR 46.110 category(ies) 7**  
 Protocol Approval Date: **June 10, 2013**  
 Protocol Expiration Date: **June 9, 2014**  
 Continuing Review Due Date\*: **May 26, 2014**

\*Date a Continuing Review application is due to the IRB office if human subject activities covered under this protocol, including data analysis, are to continue beyond the Protocol Expiration Date.

**FEDERALLY FUNDED RESEARCH REQUIREMENTS:**

Per federal regulations, 45 CFR 46.103(f), the IRB is required to compare all federally funded grant proposals/work statements to the IRB protocol(s) which cover the human research activities included in the proposal / work statement before funds are released. Note that this requirement does not apply to Exempt and Interim IRB protocols, or grants for which VT is not the primary awardee.

The table on the following page indicates whether grant proposals are related to this IRB protocol, and which of the listed proposals, if any, have been compared to this IRB protocol, if required.

*Invent the Future*

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY  
*An equal opportunity, affirmative action institution*

*Table 1. Descriptive Statistics for Dependent Variables Within Condition*

Variable	Mastery Condition				Performance Condition			
	Learning-Frame		Competitive-Frame		Learning-Frame		Competitive-Frame	
	M	SD	M	SD	M	SD	M	SD
Recommendations Given	14.52	2.64	14.48	3.97	14.57	3.98	16.70	3.26
Variety	5.33	2.02	5.04	2.19	4.61	2.42	6.33	3.04
Frequency	10.33	5.53	8.44	5.14	8.46	5.19	11.33	6.63
Total Variety	10.00	3.10	10.88	3.19	10.07	3.23	11.19	3.66
Total Frequency	17.70	5.61	16.24	5.85	16.64	6.77	18.44	6.96
Recommendations Recalled	2.74	1.43	2.48	1.12	2.64	0.95	2.41	1.39
Self-Monitoring	9.41	3.18	10.16	2.46	10.56	3.63	9.07	3.52

*Note.* Mastery-Learning: n=27; Mastery-Competitive: n=25; Performance-Learning: n=28; Performance Competitive: n=27

*Table 2. Means, Standard Deviations, and Intercorrelations for all Covariate and Dependent Variables Collapsed over all Conditions*

Variable	M	SD	1	2	3	4	5	6	7
Recommendations Given	15.08	3.58	-						
Variety	5.32	2.50	0.35**	-					
Frequency	9.65	5.72	0.21*	0.73**	-				
Total Variety	10.52	3.30	-0.16	0.69**	0.44**	-			
Total Frequency	17.27	6.31	-0.18	0.50**	0.75**	0.68**	-		
Recommendations Recalled	2.57	1.23	0.10	0.30**	0.39**	0.21*	0.28**	-	
Self-Monitoring	9.79	3.25	-0.02	0.08	0.05	0.13	0.07	-0.03	-

*Note.* n = 107; \*p < .05; \*\*p < .01



*Table 3. Intercorrelations between Covariate and Dependent Variables within the Mastery Condition*

Variable	1	2	3	4	5	6	7
Recommendations Given	-	0.37	0.19	-0.22	-0.15	0.09	-0.38
Variety	0.53**	-	0.80**	0.69**	0.63**	0.40*	-0.10
Frequency	0.34	0.55**	-	0.47*	0.78**	0.37	-0.18
Total Variety	-0.11	0.55**	0.21	-	0.74**	0.32	-0.31
Total Frequency	-0.31	0.13	0.62**	0.44*	-	0.38	0.16
Recommendations Recalled	0.17	0.30	0.51**	0.31	0.39*	-	0.09
Self-Monitoring	0.19	0.07	-0.05	-0.01	-0.26	-0.14	-

*Note.* Mastery-Learning: n=27, Mastery-Competitive: n=25; \*p < .05; \*\*p < .01.

Correlations below the diagonal are Mastery-Learning (fit condition) correlations.

Correlations above the diagonal are the Mastery-Competitive (non-fit condition) correlations.

*Table 4. Intercorrelations between Covariate and Dependent Variables within the Performance Condition*

Variable	1	2	3	4	5	6	7
Recommendations Given	-	0.20	-0.04	-0.29	-0.31	0.30	0.10
Variety	0.29	-	0.77**	0.71**	0.55**	0.10	0.17
Frequency	0.28	0.75**	-	0.59**	0.79**	0.40	0.14
Total Variety	-0.17	0.78**	0.50**	-	0.79**	-0.12	0.04
Total Frequency	-0.13	0.57**	0.79**	0.74*	-	-0.06	-0.03
Recommendations Recalled	-0.01	0.45*	0.56**	0.33	0.39*	-	-0.04
Self-Monitoring	-0.18	0.00	0.11	0.13	0.34	0.06	-

*Note.* Performance-Learning: n=28, Performance Competitive: n=27; \*p < .05; \*\*p < .01

Correlations below the diagonal are the Performance-Competitive (fit condition) correlations.

Correlations above the diagonal are the Performance-Learning (non-fit condition) correlations.

*Table 5. Motivational Orientation x Feedback Framing ANCOVAs for Variety and Frequency Controlling for Recommendations Given*

Effects	SS	df	MS	F	$\eta_p^2$
Variety					
Recommendations Given	60.74	1	60.74	11.09**	0.10
Motivational Orientation	0.03	1	0.03	0.01	0.00
Feedback Framing	6.18	1	6.18	1.13	0.01
MO X FF	15.51	1	15.51	2.83^	0.03
Error	558.90	102	5.48		
Frequency					
Recommendations Given	100.63	1	100.63	3.21^	0.03
Motivational Orientation	0.95	1	0.95	0.03	0.00
Feedback Framing	0.96	1	0.96	0.03	0.00
MO X FF	112.14	1	112.14	3.58^	0.03
Error	3198.46	102	31.36		

*Note.* n = 107; ^p < .10; \*p < .05; \*\*p < .01

*Table 6. Motivational Orientation x Feedback Framing ANCOVAs for Recommendations Recalled Controlling for Recommendations Given*

Effects	SS	df	MS	F	$\eta_p^2$
Recommendations Recalled					
Recommendations Given	2.47	1	2.47	1.62	0.02
Motivational Orientation	0.48	1	0.48	0.031	0.00
Feedback Framing	2.26	1	2.26	1.48	0.01
MO X FF	0.03	1	0.03	0.21	0.00
Error	155.90	102	1.53		

*Note.* n = 107; ^p <.10; \*p<.05; \*\*p<.01

*Table 7. Summary of Regression Analysis for Variety of Feedback Behaviors Exhibited*

Effects	<i>Unstd. Beta</i>	<i>Std. Error</i>	<i>t</i>
Recommendations Given	-0.15	0.23	-0.66
Self-Monitoring	-0.53	0.35	-1.51 <sup>^</sup>
Motivational Orientation	-0.16	0.81	-0.20
Goal Pursuit	-0.59	0.84	-0.71
RG X SM	0.04	0.02	1.69*
MO X SM	0.01	0.08	0.18
GP X SM	0.03	0.08	0.36
MO X GP	0.80	0.23	1.01
MO X GP X SM	-0.04	0.08	-0.57

*Note.* n = 107; <sup>^</sup>p < .15; \*p < .10

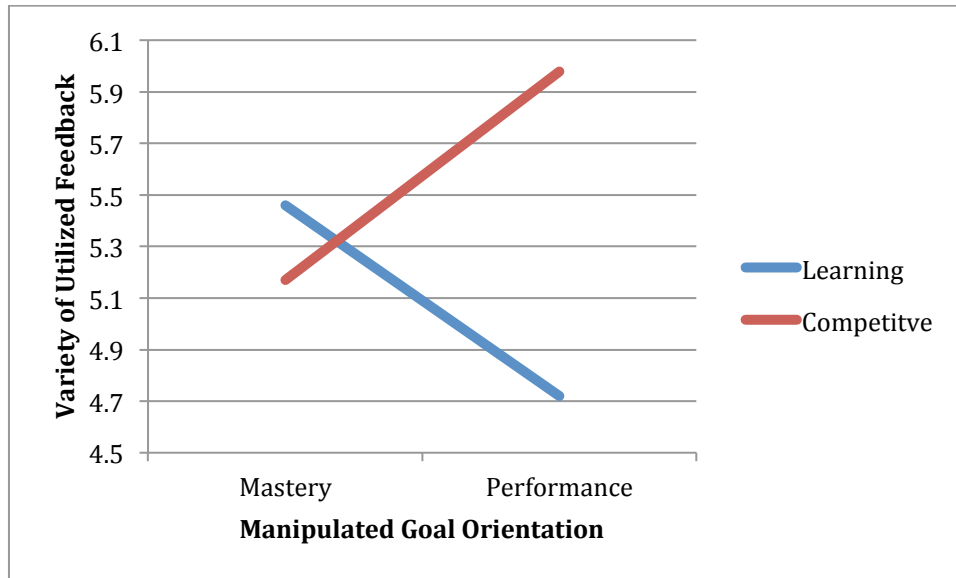


Figure 1. Variety of Feedback Utilized as a Function of Manipulated Goal Orientation and Feedback Framing

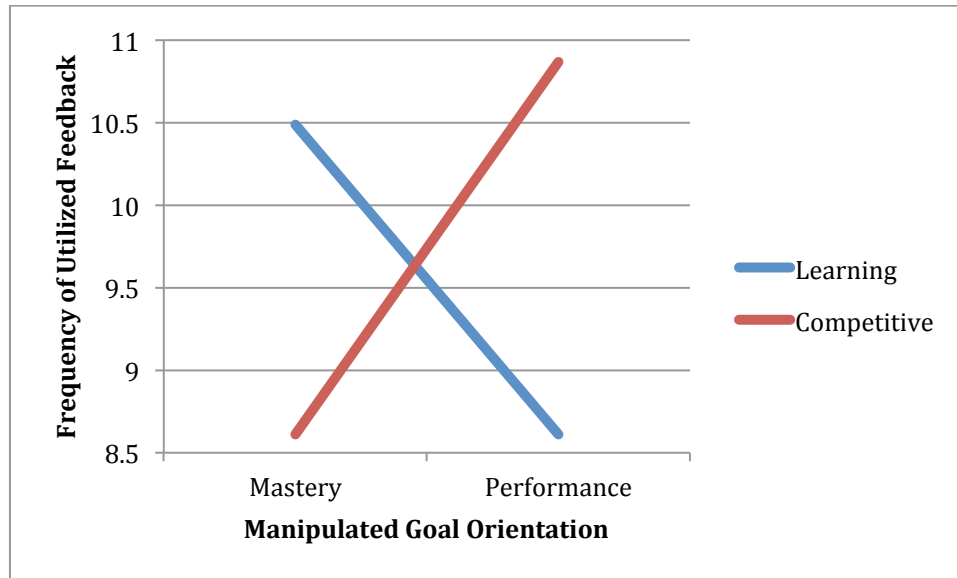


Figure 2. Frequency of Feedback Utilized as a Function of Manipulated Goal Orientation and Feedback Framing