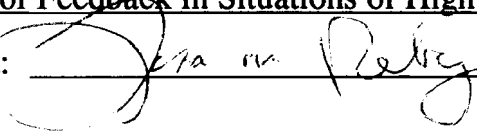
AN ABSTRACT OF THE THESIS OF

Teresa J. Wedel for the Master of Science in Industrial/Organizational Psychology presented on May 3, 1996.

Title: The Effects of Feedback in Situations of High Anxiety

Abstract approved: 

Similar to the activation theory, Huber (1985) found a negative and linear relationship between anxiety level and task performance. The current study investigated whether feedback could indirectly alleviate the negative effects of anxiety on performance through its relationship with goal setting. Anxiety was induced by requiring participants to perform a difficult task and attain a difficult goal. Participants were given 3 trials to attain the goal. After each trial a different type of feedback (incentive, incentive/directive, no feedback) was administered. Support was not found for feedback decreasing arousal level and in turn increasing performance.

THE EFFECTS OF FEEDBACK IN SITUATIONS OF HIGH ANXIETY

A Thesis

Presented to

the Division of Psychology and Special Education

EMPORIA STATE UNIVERSITY

In Partial Fulfillment

of the Requirements for the Degree

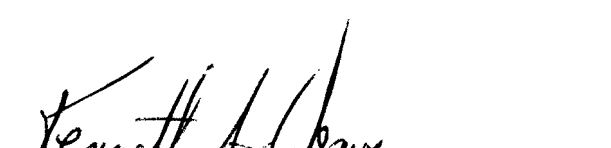
Master of Science

---

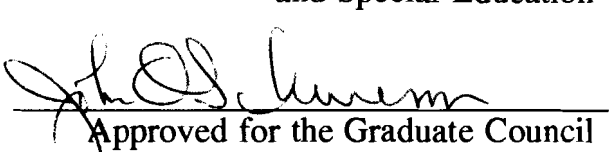
by

Teresa J. Wedel

August 1996



Approved for the Division of Psychology
and Special Education



Approved for the Graduate Council

ACKNOWLEDGMENTS

I feel that it is important to recognize the individuals who contributed to the successful completion of my thesis.

First, I would like to thank Dr. Reboy for accepting the role as my thesis committee chairperson. I am grateful for her willingness to take the extra time and effort to assist. As well, I would like to thank my thesis committee members: Dr. Baker and Dr. Weaver. I appreciated their time, effort and advisement that was given during the completion of my thesis.

Second, I would like to extend a special thank you to Dr. Murphy. Dr. Murphy was not only a significant contributor in the initial stages of my thesis, but also grew to become a close friend and mentor.

Third, I would like to thank my mother and father for all of their love and support. By providing this they gave me the confidence to endure the challenges of a thesis as well as graduate school.

Finally, I would like to thank Corey Wedel. Corey provided me with the support, encouragement, guidance and stamina needed to complete this project. For this, I dedicate my thesis to my wonderful husband.

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER I

INTRODUCTION

For many years, researchers have studied the effects of goal setting on task performance (Becker, 1978; Erez, 1977; Huber, 1985; Locke, Cartledge & Koeppel, 1968). In general, this research demonstrates a linear relationship between these variables. Setting difficult, yet attainable, specific goals can lead to higher task performance. However, Huber's (1985) research indicated an individual's anxiety level may moderate this relationship. Huber (1985) suggested that as the difficulty of a goal and task level increases, an individual's anxiety level also increases, resulting in a negative relationship between anxiety level and task performance.

The purpose of this study is to examine whether this negative relationship can be altered. Feedback was hypothesized to indirectly alleviate the negative effects of anxiety on task performance through its relationship with goal setting. First, the paper reviews the empirical findings of goal setting theory. This includes a detailed discussion of the three contextual variables necessary for goal setting to be effective--ability, commitment, and feedback. Second, task difficulty is explained. Third, the relationship between task difficulty, goal difficulty and anxiety is addressed. Fourth, the hypotheses for the present research are delineated, proposing feedback is necessary to decrease anxiety and, as a result, increase task performance.

Goal Setting Theory

The question that led to the study of goal setting was why do some people perform better on work tasks than others (Locke & Latham, 1990b)? The question was answered by Ryan (1970) and Locke (1969). Each believed people's motivation to perform a task is based on their conscious purposes, plans and/or intentions. In other words, the degree to which an individual is motivated

to perform a task is dependent upon the presence of a goal. This hypothesis initiated the study of goal setting.

Since then, research has confirmed Ryan's (1970) and Locke's (1969) hypothesis, and goal setting has become known as a mechanism of motivation (Locke, Shaw, Saari, & Latham, 1981). Goal setting theory suggests that goals, whether objectives or aims of action (Locke & Latham, 1990b), directly motivate individuals to complete a piece of work (Locke & Latham, 1990a) by directing attention and action toward the attainment of the task (Locke et al., 1981). In other words, giving people a goal motivates them to exert the appropriate amount of effort in the direction of the goal in order to attain the goal. This is the basic assumption underlying goal setting. However, the mere presence of a goal is not enough to improve task performance. Goals must be both difficult and specific in order to produce the best results (Locke et al., 1981).

Difficult goals are operationalized as an increase in production of a given task in a given time period (Huber, 1985). Therefore, difficult goals require a high degree of effort and attention to attain. Easy goals, however, are just the opposite and do not require an increase in production or a high degree of effort and attention. For example, two individuals are asked to perform the same task except one is asked to complete the task 10 times in 2 minutes and the other 5 times in 2 minutes. Here, the individual asked to complete the task 10 times must exert more effort and attention in order to be successful. Thus, the former received the difficult goal and the latter the easy goal.

According to Locke (1968), goal difficulty and task performance are linearly and positively related. Consequently, difficult goals should be used over easy goals if high task performance is warranted. Locke et al. (1981) hypothesized that the effort exerted to achieve a goal is exerted "simultaneously with direction in proportion to the perceived requirements of the goal/task"

(p. 132). Thus, difficult goals produce higher task performance than easier goals because people must exert more effort in order to be successful (Kahneman, 1973). Locke (1982) found the mean performance of individuals with hard goals significantly higher than the mean performance of those with an easy goal. Erez and Zidon (1984) also found support for this concept in their research on goal acceptance and goal difficulty.

On the other hand, a specific goal clearly articulates the standard of proficiency an individual is working toward. A vague goal does not make this specification. For example, a goal of completing 10 addition problems in 3 minutes would be a specific goal. Here, the individual knows what to do to successfully complete the task. This individual would also attempt to exert the appropriate amount to effort in order to achieve this goal. However, a vague goal of completing as many addition problems as possible would not inform the individual what to do to complete the goal. Consequently, less effort may be exerted on the vague goal. Many studies support the hypothesis that difficult specific goals produce better performance than easy, vague goals (Locke et al., 1981). In summary, goal setting is a mechanism of motivation. However, in order for goal setting to be effective, the given goal must be difficult enough for the individual to exert an appropriate amount of effort and attention and specific enough for individuals to know what they must do to be successful.

Contextual Variables of Goal Setting

As stated above, difficult specific goals must be set in order for the linear relationship between goals and task performance to be observed. However, Locke and Latham (1990a) suggest that ability, commitment, and feedback must also be present in order for goals to have an effect on performance

Ability

In order for goals to enhance task performance, individual ability level must be considered. In other words, when setting goals, one must be sure that the ability to perform the task is present (Locke, 1982). Locke (1982) found a curvilinear relationship between task performance and goal difficulty. Here, task performance leveled off as goal difficulty exceeded the individual's ability. At the easy to difficult goal levels, the correlation between goal level and performance was .83. In the goal levels of difficult to impossible, the correlation dropped to .11. This exemplifies a significant leveling in the goal-performance relationship when goal difficulty exceeds individual ability. Thus, ability must be present in order for goals to enhance performance.

Even though the goal difficulty and performance correlation diminishes when difficulty exceeds ability, performance does not drop as long as subjects continue to try for their goal. Locke and Latham (1990b) found ability to be greater at difficult and impossible goal levels than at easy goal levels. This increase in performance is attributed to individuals attempting easy to difficult goals who are asked to stop once their goal is reached. On the other hand, individuals attempting the difficult to impossible goals continue to strive for their goal. Consequently, ability can increase task performance at impossible goal levels.

In summary, in order for goal setting to enhance task performance individual ability must be considered. Ability indirectly affects the goal level-performance relationship when goals are set at impossible levels. But at the same time ability enhances performance at difficult and impossible goal levels.

Commitment

Commitment, defined as an individual's determination to attain a goal (Erez & Zidon, 1984), is the second contextual variable in goal setting. Research found

that this determination to attain a goal has a facilitating effect on task performance. While looking at individual goal levels, Erez and Zidon (1984) noticed commitment to have a direct positive relationship with performance. Thus, the effectiveness of goal setting is dependent upon the existence of goal commitment. In Locke, Latham, and Erez's (1988) words, "it is virtually axiomatic that if there is no commitment to goals, then goal setting does not work" (p. 23).

However, there has been some confusion in the research between the definitions of goal commitment and a similar term, goal acceptance. Goal commitment is the determination to attain a goal, regardless of where it originated (i.e., set by the individual, participatively set, or assigned by someone else). On the other hand, goal acceptance refers to commitment to an assigned goal. Goal acceptance is a subtype of goal commitment (Locke et al., 1988), and the terms are often used interchangeably in the research (Locke & Latham, 1990b).

Nevertheless, goal commitment/acceptance is an essential variable in goal setting. This variable affects task performance and plays a key role in the understanding of the relationship between goal difficulty and task performance. Commitment and goal difficulty are negatively related (Erez & Zidon, 1984). That is, as the difficulty of a goal increases, the individual's goal commitment decreases, thus resulting in decreased performance. However, the opposite is true when the goal is accepted. A positive linear relationship is present between performance and goal difficulty when the assigned goal is accepted. Consequently, goal commitment must be present in order for goal difficulty to increase task performance.

Further, research has found commitment to a goal can facilitate goal setting in other ways as well. First, Erez and Zidon (1984) found the ability-performance relationship significantly higher when goals were accepted (ranging from .79 to .81), compared to the performance when goals were not accepted (ranging from

.39 to .44). And second, the superiority of setting specific, difficult goals was found to enhance when individuals were committed to attaining their assigned goals (Erez & Zidon, 1984). Consequently, one can see the importance of goal commitment to goal setting.

Factors affecting commitment. Since goal commitment is extremely important to the effectiveness of goal setting, looking at the factors affecting the presence of commitment is important. Three factors affecting commitment that are relevant to this research study are authority, incentives and expectancy of success.

First, when an authority figure assigns a goal, commitment is fostered. Most goal setting studies focus on the effects of assigned goals (Locke & Latham, 1990b). Surprisingly, subjects in these studies tried to do what they were asked to do. This commitment to the assigned goals was explained as a reflection of compliance with legitimate authority (Locke & Latham, 1990b) with the experimenter serving as the legitimate authority. In sum, subjects tend to commit to goals assigned to them in an experimental situation because the authority figure (experimenter) told them to do it (Milgram, 1963). The subjects believed they were to do what they were told to do, so they committed to the assigned task. Thus, the authority figure telling the subjects to complete a task motivated the subject to commit to it (Locke & Latham, 1990b).

Second, although only a few goal and incentive studies actually measuring goal commitment exist, incentives have been found to facilitate performance through the mechanism of commitment (Locke & Latham, 1990b). For example, Latham, Mitchell, and Dossett (1978) found subjects who were offered incentives for high performance for reachable goals performed significantly better than the subjects offered recognition or no incentives. Also, Riedel, Nebeker, and Cooper (1988) found paying subjects who surpassed a reachable assigned goal led to goal commitment. Consequently, more research in this area is needed to further

explain and clarify commitment's relationship with incentives. Yet, the current research suggests a positive effect.

Third, there is research evidence that self-efficacy also fosters goal commitment (Locke & Latham, 1990a). Self-efficacy is defined as the individual's beliefs about how well the requested task can be performed (Bandura, 1982). If one perceives one's capabilities as high, one has high self-efficacy. However, the opposite is true as well.

Commitment declines as the goal becomes more difficult and/or the person's perceived capabilities of reaching the goal declines. In other words, as the individual's perception of completing the assigned task declines, commitment to the goal also declines (Locke & Latham, 1990a). Erez and Zidon (1984) also found support for this relationship.

In summary, goal commitment is an essential variable in goal setting. Individuals must be attached to the goal in order for goal setting to increase performance. Goal commitment also facilitates task performance of difficult goals. Authority, incentives and expectancy of success are three factors that affect the strength of individual commitment.

Feedback

The third contextual variable necessary for goal setting is feedback, defined as the information given to an individual with respect to the effectiveness of behavior (Ilgen, Fisher, & Taylor, 1979). This variable is necessary in goal setting because it provides the individual with information to evaluate performance (Locke et al., 1981; Locke et al., 1968; Organ, 1977). This evaluation is needed in order for subsequent performance to be improved. For example, in a goal setting situation an individual is first given a goal. This goal will direct the individual's attention to a level of performance. Then, when the feedback is given, the individual is informed as to progress toward the attainment of the goal.

The goal motivates performance in a specific direction, and the feedback serves as a yardstick for evaluating performance in relation to the goal (Locke et al., 1981). Consequently, the manner in which the goal is appraised is dependent upon the feedback given.

Once given feedback, the individual is allowed to appraise the information in relation to the goal and consequently adjust or maintain subsequent behavior (Locke et al., 1968; Locke et al., 1981). If feedback indicates the goal was not met, the individual could choose to increase effort or change strategy. Or, if feedback indicates the goal was met, the individual can choose to continue with that strategy or level of effort. Either way, without feedback the individual would not know the performance in relation to the task and may continue to perform at an unacceptable level. Consequently, performance would not be improved. Thus, the effectiveness of goal setting is potentially improved by the presence of feedback.

However, the manner in which performance is improved is dependent upon the type of feedback given. Feedback can facilitate behavior in two fashions. The first is incentive feedback (Locke et al., 1968). This form of feedback gives the individual the most basic information about performance. Incentive feedback informs the individual of performance in relation to attaining the goal. It indicates whether the goal was met or not met. Incentive feedback also signals the individual to either maintain current effort or work harder to achieve the goal.

One important aspect about incentive feedback is that it does not inform the individual how to improve subsequent performance. Again, the participant is only informed as to whether the goal was met. Thus, the individual must choose what to do in order to improve subsequent behavior. An example of incentive feedback is a chart of performance in relation to the goal. Here, the individual is

not informed as to how performance can improve but is given enough information to work harder to achieve the goal.

The second type of feedback is directive feedback, where the individual is informed as to "the type, extent, and direction of errors so that they may be corrected" (Becker, 1978, p. 428). This type of feedback differs from incentive feedback because participants are given information as to the effectiveness of their current performance and how subsequent performance may be improved. Directive feedback is used to identify and correct errors and ultimately improve the method of performing the task (Becker, 1978; Locke et al., 1968). For example, in the case of a person completing triple digit addition problems, knowledge about forgetting to carry numbers will help the person to improve performance. This information cues the individual as to maximizing performance.

Directive feedback can also indirectly serve as incentive feedback (Locke et al., 1968). For example, summary feedback can suggest to the individual ways to improve, which in turn indirectly motivates better performance. However, the opposite is not necessarily true (Locke et al., 1968). Incentive feedback cannot usually fulfill a cueing function, especially when used with a complex task. Thus, although the effectiveness of goal setting is potentially improved by the presence of feedback, the type of feedback given must be considered.

Since feedback is a contextual variable needed for goal setting, the relationship between feedback and goal setting is complex. Research has found that feedback's effectiveness on performance is dependent upon the presence of specific, difficult goals. In a study by Latham et al. (1978), no differences were found between individuals who were given vague goals with feedback and individuals who received no feedback. However, when specific hard goals were assigned or chosen and feedback was given, individuals performed significantly better than those with vague goals and feedback. Bandura and Simon (1977)

also found results consistent with Latham et al's. (1978) in their study of weight loss. Becker (1978) hypothesizes why feedback's effectiveness is dependent upon the presence of goals:

> If a person has a difficult goal but no information about how his or her performance compares to that goal (whether it is below, above, or at the goal), there is no way the person can know whether an increase, decrease, or no change is needed in the amount of effort being exerted. (p. 429)

In other words, feedback is necessary for the individual to know how to change behavior so the goal may be achieved.

In summary, the relationship between feedback and goal setting is a well established finding in the research literature (Locke et al., 1981; Locke & Latham, 1990a; Locke & Latham, 1990b; Locke et al., 1968). Feedback is necessary in order for goal setting to significantly affect performance (Locke & Latham, 1990a), and goals are necessary for feedback to affect performance (Locke et al., 1981). Consequently, "Neither KR [feedback] alone or goals alone are sufficient to improve performance. Both are necessary" (Locke et al., 1981, p. 135). Thus, feedback should be included in any experiment designed to test the effects of goal setting.

Difficult specific goals facilitate goal setting. However, three contextual variables must also be present to further enhance these effects. An individual must possess the ability to perform the task, must be truly committed to the attainment of the goal, and must be given feedback about progress toward the goal. These factors enhance goal setting's effects on performance.

Task Difficulty

As stated earlier, goal setting's effectiveness is dependent upon the presence of a difficult specific goal. However, setting difficult specific goals does not always result in an increase in performance (Huber, 1985). A linear

relationship was found most often when the task was simple, ability was limited, and feedback was immediate (Huber, 1985). Consequently, the task may have an effect on performance; the more difficult the task becomes, the less likely setting specific difficult goals will have the same effect on performance as it has when easy goals are used (Huber, 1985). Locke et al. (1981) agrees, stating that at some level of task complexity (task difficulty), setting difficult specific goals will hinder, rather than increase performance.

A task can be considered difficult for two reasons (Locke & Latham, 1990b). The first reason is because the task is complex. A complex task requires a high level of skill and knowledge from the individual in order to complete it. For example, completing a master's thesis is more complex and requires more skill and knowledge than writing a research article review. The second reason a task is considered difficult is that the task requires the individual to put forth a great deal of effort in order to complete it appropriately. Here, the task of running a mile would be a difficult task because it requires more effort from the individual to complete than walking a mile. Furthermore, difficult tasks require more skill and knowledge and often lead to more effort on the part of the individual than an easy task. Yet, difficult tasks usually result in lower performance scores than easy tasks (Locke & Latham, 1990b).

Task Difficulty, Goal Difficulty and Anxiety

When striving for the attainment of a difficult goal, there are two processes through which anxiety can occur. First, there is an associated effect on anxiety with an increase in individual effort. For example, when given a difficult goal, an individual must exert an increased amount of effort in order to attain this goal. This in turn increases anxiety. Second, an individual's anticipation of failure also may result in an increase of anxiety. For example, as goal difficulty increases the individual may fear that the task will not be completed successfully. This fear or

anticipation of failure increases anxiety (Organ, 1977). Furthermore, like goal difficulty, task difficulty is also associated with an increase in effort and anticipation of failure. Thus, task difficulty is associated with an increase in anxiety as well. However, while an increase in anxiety facilitates task performance when task difficulty is low or with simple tasks, anxiety impairs task performance at some level of high task difficulty (Huber, 1985). This results because "increased arousal levels facilitate dominant responses, which are likely to be correct on simple tasks but incorrect on complex or novel tasks" (p. 493). Thus, if the assigned task is above a certain level of task difficulty, anxiety caused by the task and goal setting effects could ultimately adversely affect performance (Huber, 1985).

The above theory is similar to the activation theory (Fiske & Maddi, 1961; Huber, 1985; Organ, 1977). According to the activation theory, task performance and anxiety have an inverted U relationship (Yerkes & Dodson, 1908). Simply, as anxiety increases to a certain point, performance is facilitated. Yet, beyond this point, task performance is impaired (Huber, 1985). This activation theory is also congruent with the task difficulty-anxiety relationship discussed above. An increase in anxiety facilitates performance on simple tasks, yet as the task increases in complexity, at a certain point task performance is indirectly impaired through the increase in anxiety (Huber, 1985; Organ, 1977). Thus, "a corollary of the hypothesized inverted-U relationship is that simple and complex tasks differ in their optimal and acceptable activation levels for task performance" (Huber, 1985, p. 491).

Prior to Huber (1985), limited research existed concerning the relationship between task difficulty, anxiety and performance. The two studies in which these variables were examined did not find support for the idea that goal setting increased anxiety. However, this lack of support has been attributed to the fact

that the assigned tasks may not have been difficult enough to cause any sort of adverse effects on performance (Huber, 1985; Organ, 1977). Consequently, Huber (1985) investigated this relationship by using a task thought to increase anxiety and thus decrease performance.

In this study, the participants were asked to complete a computerized maze task, and the independent variables were goal difficulty and task difficulty. Also, Huber (1985) measured task-specific anxiety and performance in order to eventually examine the anxiety-performance relationship. Of the several hypotheses offered, three of them are relevant to this study: 1) the highest level of self-reported anxiety will be reported when the task is difficult and specific goals have been assigned, 2) when the task is difficult, performance will be worse when a difficult, rather than an easy or moderate goal, is assigned, and 3) a curvilinear relationship between anxiety and performance will be present.

Huber (1985) found support for the first two hypotheses. First, self-reported anxiety was significantly higher in the difficult task-specific goals conditions in comparison to the easy task-specific goals condition. Second, performance was lowest in the difficult goal-difficult task condition.

Huber (1985) also reported the relationship between performance and anxiety to be negative and linear rather than curvilinear. This finding is inconsistent with her original hypothesis (the anxiety-performance relationship will be curvilinear). However, she considered several explanations for this result. First, Huber (1985) suggested the combination of task difficulty and goal setting stimulated high levels of anxiety. With this high level of anxiety, the relationship between performance and anxiety shifted to the linear and negative side of the inverted U relationship discussed above. Unfortunately, this explanation was forfeited because Huber's (1985) overall mean for anxiety was at the mid-point of the scale.

Huber (1985) then suggested the self-report anxiety measure was not sensitive enough to measure actual anxiety. As well, she suggested the individuals were unable to accurately report actual anxiety. Huber (1985) believed the negative linear relationship could have been a product of a reactive (one will report anxiety if one performs poorly) measure of anxiety rather than an accurate measure of actual physiological anxiety.

Another interesting finding was the participants' needs for feedback. Huber (1985) noted the poor performance of individuals in the difficult task condition was due to their need for feedback. Participants "peeked" more frequently at the overall maze in order to find out what to do when given a hard goal/difficult task. This would seem logical to Organ and Hamner (1982) who report that a by-product of anxiety is requiring more performance information and feedback than less aroused individuals. Huber (1985) suggests these participants choose to gain some sort of feedback in order to possibly reduce their anxiety to a more functional level in order to perform better. As stated before, feedback reduces anxiety by informing individuals of the effectiveness of behavior and possibly suggesting how to improve. This information then allows them to adjust or maintain their behavior in order to attain success. Also, by informing individuals of the effectiveness of their behavior, feedback reduces anxiety by reducing the likelihood of failure.

In summary, Huber (1985) found the combination of goal difficulty and task performance results in anxiety. She also found support that this anxiety, caused by the combination of these two variables, indirectly affects performance negatively. This finding is consistent with Scott (1967) who stated anxiety is caused by the manner in which the task is designed, not the anxiety per se. Finally, Huber (1985) recognized an interesting pattern; the individuals in the difficult task condition spent more time "peeking" at the overall maze than those

in any other condition. In an effort to explain this behavior, Huber (1985) suggested the "peeking" provided needed feedback to reduce anxiety to a more effective level.

Hypotheses

Building from Huber's (1985) findings and suggestions, this study was intended to examine the effects of feedback on anxiety and performance. However, instead of studying the complete curvilinear relationship between performance and anxiety, this study focused on the linear and negative half of the curve. The experimenter wanted to induce anxiety, cause the shift in the performance/anxiety relationship to be linear and negative and examine feedback's effect on this relationship. The following hypotheses were tested:

Hypothesis 1: There will be a negative and linear relationship between performance and anxiety.

Hypothesis 2: Participants in the directive/incentive feedback conditions will score lower on the self-reported anxiety measure than individuals in the no feedback conditions.

Hypothesis 3: Participants in the directive/incentive feedback conditions will have higher performance scores than participants in the no feedback or incentive feedback conditions.

CHAPTER II

METHOD

Sample

Sixty undergraduate (n = 57) and graduate (n = 3) psychology students from Emporia State University volunteered to participate in this study. The mean age of the participants was 25 years (SD = 6.53).

Experimental Design

This study used a four group, within-subject design. Condition groups were determined by type and order of feedback given. Feedback varied in two ways: incentive feedback and directive/incentive feedback. Forty-four females and 16 males were randomly assigned to one of the four condition groups. Students participated in groups of 15.

Incentive feedback informed the participants of the effectiveness of their current performance in relation to the goal. This was done by giving the participants an opportunity to calculate their individual total number of correct responses, plot this number next to the assigned goal (see Appendix A) and determine whether they had achieved the assigned goal.

Directive/incentive feedback informed the participants of their current performance, as well as suggested a method to improve subsequent performance. Here, the experimenter followed the same steps as delineated for the incentive feedback condition. In addition, the experimenter told the participants of a strategy they should use while completing the task during the next trial. The strategy was grouping letters frequently grouped together (i.e., TH, ST, ED,) and forming a words by combining the remaining letters with the grouped letters.

Each group consisted of a pretest and three trials. Throughout the three trials, the groups received one variation of feedback, as well as no feedback. When the no feedback variable was administered, the participants were not given

an opportunity to correct their answers, thus they could not identify how they performed in relation to the goal. The no feedback variable was given to serve as a control variable.

Type of feedback administered varied throughout the trials. For example, the first group received no feedback during Trial 1 and incentive feedback during Trial 2. The second condition group received the same types of feedback, yet in the reverse order. Group 3 received directive/incentive feedback during Trial 1 and no feedback during Trial 2. Finally, Group 4 received the same types of feedback as the third group, yet in the reverse order. This process was chosen in order to examine if feedback effects are immediate.

The dependent variables were performance and anxiety. The performance and anxiety scores, measured during Trials 2 and 3, were used to examine the effects of the feedback given during the previous trial. For example, performance from Trial 2 was used in order to measure the effect of the feedback given during Trial 1. Consequently, a formal type of feedback was not needed during Trial 3 for all condition groups. A chart of the experimental design follows:

Group	Trial 1	Trial 2	Trial 3
Group 1	No Feedback	Incentive	NA
Group 2	Incentive	No Feedback	NA
Group 3	Directive/Incentive	No Feedback	NA
Group 4	No Feedback	Directive/Incentive	NA

Task

Since this study was intended to examine the linear and negative relationship on the performance/anxiety inverted U shaped curve, the task chosen for this study needed to be difficult. Thus, an anagram task was chosen. This task required the participants to unscramble 30 six-letter words (see Appendix B)

and record the answers within a specified amount of time. This task has a high difficulty level for two reasons. First, the participants must put forth a great deal of effort in order to formulate a strategy for unscrambling the words. Second, focused attention is needed to complete the task within the time constraint.

Material

At the beginning of the experiment, each participant was given a folder containing several pieces of material used throughout the testing session. The folders contained the informed consent form (see Appendix C), the Eysenck Personality Inventory (EPI) (see Appendix D), along with three pretest measures (see Appendix E, F & G), the performance/goal chart (see Appendix A) and two posttest measures (see Appendix H & I). Participant experimental numbers were documented on all materials within this folder.

The EPI was selected because of its ability to measure neuroticism. According to Organ (1977), the Neuroticism (N) scale of the EPI is the same as anxiety. This test was given in anticipation of identifying individual predisposition to anxiety and using it during the data analysis to partial out general anxiety from anxiety induced by the task (Huber, 1985). The EPI has an internal reliability range from .75 to .90. Also, test-retest reliability ranges from .70 to 90.

The three pretest measures were individual acceptance, individual self-efficacy and individual commitment. Individual acceptance of the goal was measured by having participants sign their names to the goal statement only if they had read, understood, and agreed to the specified goal (Huber, 1985). Individual self-efficacy and individual commitment toward the goal was measured through responses on a seven point Likert scale, where "1" was very unconfident/ uncommitted and "7" as very confident/committed (Huber, 1985).

The first posttest measure was a task-specific anxiety measure. This is a three-item measure that asks participants to indicate on a seven-point scale how they felt while working on the anagram problems. The second posttest measure was similar to the task-specific anxiety measure, but it was designed to examine task complexity. Both tests were developed by Scott (1967) and were used by Huber (1985).

Pilot Study

A pilot study was conducted to determine a difficult goal level. Twelve undergraduate students enrolled in an education class participated. Over three trials, these students were shown three sets of 30 six-letter words and given 10 seconds to unscramble each word (see Appendix B). One set of words was shown during each trial.

The distribution of average scores was examined to select the goal level. The average performance scores of the individuals in the top 25% of each trial was 9.6. Scores in the top 25% of each trial ranged from 6 to 13. The difficult goal level chosen was 9. This procedure was modeled after Huber (1985).

Procedures

The experiment began when all participants were in the experiment room, seated and given a folder. At this point, each participant was asked to complete the informed consent form. These forms were then collected. The first step of the experiment was to administer the EPI.

Following the EPI, the pretest was administered (see Appendix D) to measure individual ability level. Next, the participants were informed of the assigned goal. They were told to correctly solve at least 9 scrambled word out of the 30 presented. Then, the experimenter explained the participant who successfully completes the most anagrams will receive a prize of $20, and the two people who are the next highest will each receive $10. These cash prizes were

intended to serve as incentives for high performance. Third, three pretest measures were administered. Finally, Trial 1 was administered and the participants were given an opportunity to attain the goal.

Trial 1

During Trial 1, each anagram was projected on a screen in front of the room. The projection size was large enough for the entire testing group to see. After 10 seconds, the next anagram was presented. Within this time, the participants were to solve the anagram and record their answer on the answer sheet given to them. This continued until all 30 of the anagrams in trial 1 were presented. Then, the appropriate type of feedback was administered.

After the feedback was administered, the experimenter administered the two posttest measures. Once these tests were administered, the second trial began.

Trial 2

The second trial began with the experimenter restating the assigned goal of nine. Then, individual acceptance of the goal, individual self-efficacy and individual commitment toward the goal was measured for Trial 2. The steps followed during Trial 2 were identical to those followed during Trial 1. Also, the appropriate feedback conditions were administered to the appropriate condition group. Once feedback was administered, the experimenter again administered the posttest measures and proceeded to next trial.

Trial 3

The third testing session began with the experimenter restating the assigned goal of nine. Then, individual acceptance of the goal, individual self-efficacy and individual commitment toward the goal was measured for Trial 3.

The steps of Trial 3 was identical to those of Trials 1 and 2. However, since Trial 3 was the final testing trial, feedback was not necessary. Thus, no feedback

was given. Instead, the participants calculated the number of correct answers from Trial 3 and continued to the posttest measures. As well, each participant completed a demographics worksheet. Finally, the experimenter asked the participants to put all of the papers back into their folder. Then, the experimenter gathered all folders, announced the debriefing times, and excused the participants.

CHAPTER III

RESULTS

Statistical Design

This study examined the effects of feedback on performance and anxiety. Performance, the first dependent variable, was defined as individual trial scores achieved during each trial. The second dependent variable, anxiety, consisted of the cumulative scores of the task-specific anxiety measure.

Three analyses were performed in order to test the hypotheses. First, the correlation between overall performance and overall anxiety was calculated. Second, two one way analyses of variance were completed for Trials 2 and 3. The first analyzed the feedback effects on anxiety level. The second analyzed the feedback effects on performance.

In addition, the means and standard deviations were calculated for the self-efficacy, commitment, task specific anxiety and task complexity measures. These measures were scored in the direction of the second adjective in each pair and summed. Means and standard deviations of the pretest and posttest measures are presented in Table 1 and 2 respectively. The (N) scale scores of the EPI measure were not used because identifying individual predisposition to anxiety was not necessary.

Hypotheses

Hypothesis 1

A negative and linear correlation between performance and anxiety was predicted. In other words, performance was predicted to increase as individual anxiety level decreased. A significant correlation was not found ($r = -.07$, $p > .05$). Thus, Hypothesis 1 was not supported.

Table 1

Means and Standard Deviations of Pretest Measures

Variable	Trial							
	1		2		3		Overall	
	M	SD	M	SD	M	SD	M	SD
Self-Efficacy	4.3	1.8	3.6	1.7	3.8	2.0	11.6	5.0
Commitment	5.1	1.9	5.3	1.6	5.3	1.7	15.7	4.2

Notes. Maximum score for trials = 7. Maximum score for overall = 21.

Table 2

Means and Standard Deviations of Posttest Measures

Variable	Trial							
	1		2		3		Overall	
	M	SD	M	SD	M	SD	M	SD
Task Specific Anxiety	12.6	3.1	12.8	3.4	13.2	4.0	38.6	9.05
Task Complexity	15.6	3.3	15.0	3.9	15.0	3.6	45.6	7.3

Notes. Maximum score for trials = 21. Maximum score for overall = 63.

Hypothesis 2

Hypothesis 2 was tested using separate one way analyses of variance performed for each trial. Support for this hypothesis was not found in either of the two trials, $F_2(2, 59) = 1.2$, $p > .05$; $F_3(2, 59) = 3.6$, $p > .05$. Means and standard deviations for hypothesis 2 are presented in Table 3.

Hypothesis 3

Hypothesis 3 was tested using separate one way analyses of variance performed for each trial. In both Trial 2 and 3 support was not found for hypothesis 3, $F_2(2, 59) = 5.0$, $p > .05$; $F_3(2, 59) = 3.5$, $p > .05$. Means and standard deviations for hypothesis 3 are presented in Table 4.

Table 3

Anxiety Means and Standard Deviations of the Feedback Group and Trial Group

Feedback Group	Trial 2 M	Trial 2 SD	Trial 3 M	Trial 3 SD
No Feedback - Incentive	12.4	2.5	11.6	2.6
Incentive - No Feedback	13.1	3.1	14.4	3.7
Directive/Incentive - No Feedback	13.8	3.8	14.7	4.1
No Feedback - Directive/Incentive	12.0	4.1	12.2	4.7
Overall	12.8	3.4	13.2	4.0

Notes. Maximum score for each trial = 21. n = 15.

Table 4

Performance Means and Standard Deviations of the Feedback Group and Trial Group

Feedback Group	Trial 1 M	Trial 1 SD	Trial 2 M	Trial 2 SD	Trial 3 M	Trial 3 SD
No Feedback - Incentive	7.7	3.7	10.3	4.5	9.9	4.4
Incentive - No Feedback	7.0	3.9	8.6	3.1	8.1	3.9
Directive/Incentive - No Feedback	5.4	2.5	5.7	3.0	5.7	3.0
No Feedback - Directive/Incentive	7.0	4.5	9.1	5.0	9.2	4.4
Overall	6.7	3.7	8.4	4.2	8.2	4.2

Notes. Maximum score for each trial = 30. n = 15. Trial 1 data is a base line measure for ability.

CHAPTER IV

DISCUSSION

Analysis of the correlation coefficient between performance and anxiety did not support Hypothesis 1. This result was discouraging because the remaining hypotheses were based on the support of this negative relationship.

Hypothesis 2 predicted participants in the directive/incentive feedback condition would score lower on the self-reported anxiety measure than individuals in the no feedback conditions and was not supported. In accordance with Huber's (1985) research implications, receiving feedback would reduce anxiety because of the participants' need for knowing how they are doing in relation to the goal. However, findings showed the participants who received no feedback during Trial 2 and incentive feedback during Trial 3 scored lower on the self-reported anxiety measure.

Support was also not found for Hypothesis 3. The experimenter predicted that if directive/incentive feedback would decrease anxiety to a more functional level, performance would increase due to its negative relationship with anxiety. However, again findings showed the participants who received no feedback during Trial 2 and incentive feedback during Trial 3 performed higher. Results of Hypotheses 2 and 3 indicate directive/incentive feedback was not as effective as anticipated.

Theoretical Implications

Goal setting research has found individual anxiety level resulting from task difficulty as well as goal difficulty may adversely effect performance (Huber, 1985; Organ, 1977) and, result in a negative relationship between performance and anxiety. However, Huber (1985) suggested that through feedback participants could reduce anxiety to a more productive level. This study was

intended to examine whether feedback actually could alter this linear and negative performance/anxiety relationship.

Several explanations can be given to explain why support was not found for the three hypotheses of this study. First, commitment, one of goal setting's contextual variables, may have been missing. After examining the means and standard deviations of the commitment scores during each trial, commitment was found to be only slightly present (Overall $\underline{M}$ = 15.7). Taking in mind commitment's direct relationship with performance, this amount of commitment possibly was not sufficient to facilitate goal setting.

On the other hand, the reported commitment level may have been sufficient for facilitating task performance. However, the commitment measuring device might have been inaccurate, or participants may have simply marked that they were committed to the goal when they really were not, consequently resulting in inflated commitment scores. Support for this explanation maybe found through the reported self-efficacy scores.

Locke and Latham (1990a) note goal commitment is fostered by self-efficacy. Thus, low self-efficacy would foster low goal commitment. The self-efficacy scores of this study indicate most participants were slightly unconfident in their ability to achieve the assigned goal (Overall $\underline{M}$ = 11.6). These low self-efficacy scores would indicate goal commitment was low as well. Consequently, the slightly above average commitment scores may be a product of an inaccurate measuring device or untruthful participants.

Second, anxiety is a product of the combination of task difficulty and goal difficulty. The difficulty of the task may not have been high enough to produce significant anxiety effects (Overall $\underline{M}$ = 45.6) and in turn shift the performance/anxiety relationship to linear and negative. The task difficulty scores indicate most participants felt the task was only slightly complex.

According to Organ (1977) and Huber (1985), an increase in anxiety facilitates performance on similar tasks, yet as the task increases in complexity, at a certain point task performance is indirectly impaired through the increase in anxiety. In this study it is possible task difficulty was too low to increase anxiety to the point where the relationship would shift to the linear and negative position. In light of not finding support for a linear and negative performance/anxiety relationship, the scatter gram for each trial was examined. The experimenter thought possibly the performance/anxiety relationship would have been in the shape of an inverted U.

Third, the manner in which feedback was administered may also be responsible for the unsupported hypotheses. Participants did not receive the same type of feedback during each trial. For example, Group 1 participants received no feedback in Trial 1, and in Trial 2 they received incentive feedback. Each group received one type of feedback in the first trial and in the following trial they received another. It is important for feedback to not only be immediate and relating to performance (Ilgen, Fisher, & Taylor, 1979), but also consistent (Hamner, 1974). Without consistent feedback, results are limited (Hamner, 1974). By administering the same type of feedback throughout each of the three trials, feedback results would be more appropriately studied. Unfortunately, the experimenter did not incorporate consistent feedback into the current study. However, the manner in which feedback was administered was chosen to examine the immediate effects of feedback on performance.

The final explanation could be related to a preexisting condition of ability. Although randomization was used to select the condition groups, equality in ability among groups may have not been present. Table 4 shows the feedback group, that received directive/incentive feedback in Trial 1 and no feedback in

Trial 2, performed poorly across all three trials. This poor performance could be attributed to low ability level rather than feedback type.

Research Implications

As stated above, commitment, task or goal difficulty, and consistency of feedback were variables that were low or missing from this study. These variables are all significant to the effectiveness of goal setting. Consequently, future studies should ensure that these variables are present.

First, in order to better measure commitment the experimenter suggests using an emotion-focused measure or an indirect measure of commitment. The emotion-focused measure would ask the participants how enthusiastic they are about achieving the assigned goal instead of the more cognitively focused measure that was used in this study. The emotion-focused measure is a more valid predictor of performance than the cognitively focused measure (Locke et al., 1988). An indirect measure of commitment would be found by taking the difference between the assigned goal and the participant's personal goal. When using this type of measure, the experimenter would need to ask the participants to report their personal goal, the goal actually trying to be attained, and figure the difference between this goal and the assigned goal.

In addition to improving the commitment measuring device, a better monetary incentive could be used to increase commitment. In this study, the monetary incentives of $20 for the highest number of correctly completed anagrams and $10 for the next two highest number of correctly completed anagrams were used to increase commitment. However, this incentive may not have been as effective as hoped. Future studies should either increase the monetary value of the incentive or use another type of incentive the participants value more than money (i.e., extra credit, an alternative way of awarding the

monetary incentive such as giving $.50 for each correct anagram). By incorporating an effective incentive, goal commitment would increase.

Second, task difficulty and goal difficulty should be increased. Using anagram words with a larger number of letters in them, using mazes, or possibly having the participants complete chess moves would require more skill, knowledge and effort to complete. Another technique for increasing task difficulty would be to decrease the time allowed to complete the task. Goal difficulty can be increased simply by choosing a higher goal.

Third, feedback must be administered consistently. Each group should receive the same type of feedback throughout each trial. For example, Group 1 would only receive incentive feedback throughout Trials 1, 2, and 3. Group 2 would only receive incentive/directive feedback throughout each trial and Group 3 would not receive any type of feedback during the trials. By providing feedback in a consistent manner, feedback effects would be better measured.

Fourth, future studies should measure task specific anxiety prior to administering feedback, rather than after feedback. In this study, the participants had to record how they felt while they were completing the anagram tasks after feedback has been measured. This was a post hoc measure; receiving accurate result from this type of reporting is difficult. Task specific anxiety would be more accurately measured if the participants were asked to report how they feel immediately after the task, rather than having to report how they felt during the task.

Practical Implications

Although the three hypotheses of this study were not supported, one should not neglect the study's practical implications. The present study emphasizes the importance of the variables that were low or not present: commitment to the goal, task complexity and consistency of feedback. The

absence of these variables meant accurate measurement of feedback's effect on anxiety level in a goal setting situation of task and goal complexity could not be measured. The research into feedback's effects on anxiety level should be reexamined, not forgotten.

REFERENCES

Bandura, A. (1982). Self-efficacy mechanism in human agency. American Psychologist, 37, 122-147.

Bandura, A., & Simon, K.M. (1977). The role of proximal intentions in self-regulation of refractory behavior. Cognitive Therapy and Research, 1, 177-193.

Becker, L. J. (1978). Joint effect of feedback and goal setting on performance: A field study of residential energy conservation. Journal of Applied Psychology, 63, 428-433.

Erez, M. (1977). Feedback: A necessary condition for the goal setting-performance relationship. Journal of Applied Psychology, 62, 624-627.

Erez, M., & Zidon, I. (1984). Effects of goal acceptance on the relationship of goal difficulty to performance. Journal of Applied Psychology, 69, 69-78.

Fiske, D. W., & Maddi, S. R. (Ed.). (1961). Functions of varied experience. Homewood, IL: Dorsey Press.

Hamner, W. C. (1974). Reinforcement theory and contingency management in organizational settings. In H. L. Tosi and W. C. Hamner (Eds.), Organizational behavior and management: A contingency approach (pp. 86-112). Chicago: St. Clair Press,

Huber, V. (1985). Effects of task difficulty, goal setting, and strategy on performance of a heuristic task. Journal of Applied Psychology, 70, 492-504.

Ilgen, D. R., Fisher, C. D., & Taylor, M.S. (1979). Consequences of individual feedback on performance. Journal of Applied Psychology, 64, 349-371.

Kahneman, D. (1973). Attention and effort. Englewood Cliffs, NJ: Prentice Hall.

Latham, G. P., Mitchell, T. R., & Dossett, D. L. (1978). Importance of participative goal setting and anticipated rewards on goal difficulty and job performance. Journal of Applied Psychology, 63, 163-171.

Locke, E. A. (1968). Toward a theory of task motivation and incentives. Organizational Behavior and Human Performance, 3, 157-189.

Locke, E. A. (1969). Purpose without consciousness: A contradiction. Psychological Reports, 25, 991-1009.

Locke, E. A. (1982). Relation of goal level to performance with a short work period and multiple goal levels. Journal of Applied Psychology, 67, 512-514.

Locke, E. A., Cartledge, N., & Koeppel, J. (1968). Motivational effects on knowledge of results: a goal-setting phenomenon? Psychological Bulletin, 70, 474-485.

Locke, E. A., & Latham, G. P. (1990a). Work motivation and satisfaction: light at the end of the tunnel. American Psychological Society, 1, 240 - 246.

Locke, E. A., & Latham, G. P. (1990b). A theory of goal setting and task performance. Englewood Cliffs, NJ: Prentice Hall.

Locke, E. A., Latham, G. P., & Erez, M. (1988). The determinants of goal commitment. Academy of Management Review, 13, 23-39.

Locke, E. A., Shaw, K. N., Saari, L. M., & Latham, G. P. (1981). Goal setting and task performance. Psychological Bulletin, 90, 125-152.

Milgram, S. (1963). Behavioral study of obedience. Journal of Abnormal and Social Psychology, 67, 371-378.

Organ, D. W., & Hamner, W. C. (1982). Organizational behavior. Plano, TX: Business Publication.

Organ, D. W. (1977). Intentional vs. arousal effects of goal setting. Organizational Behavior and Human Performance, 18, 378-389.

Riedel, J. A., Nebeker, D. M., & Cooper, B. L. (1988). The influence of monetary incentives on goal choice, goal commitment, and task performance. Organizational Behavior and Human Decision Process, 42, 155-180.

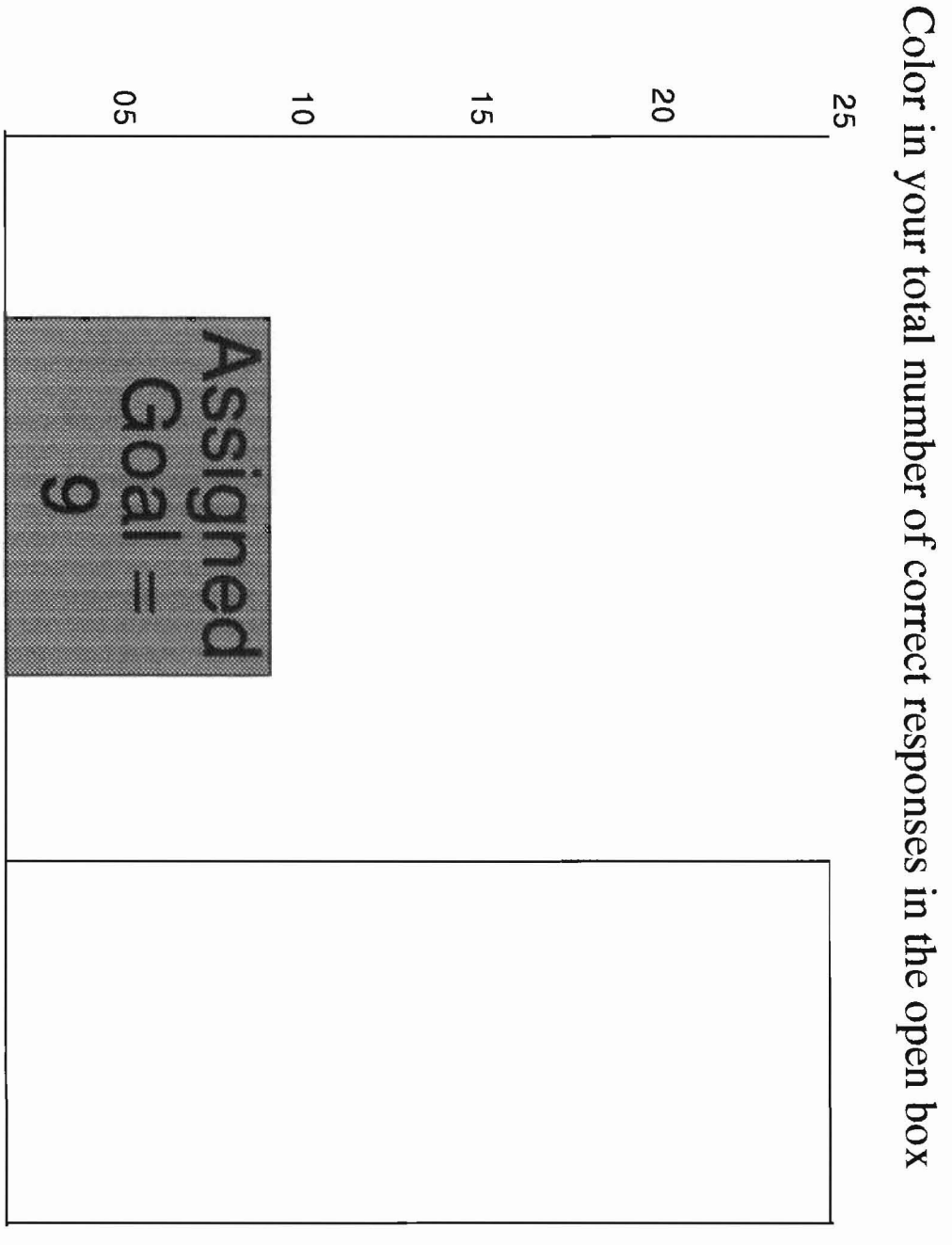
Ryan, T. A. (1970). Intentional behavior. New York: Ronald Press.

Scott, W. E. (1967). The development of semantic differential scales as measures of morale. Personnel Psychology, 20, 179-198.

Yerkes, R. M., & Dodson, J. D. (1908). The relation of strength of stimulus to rapidity of habit-formation. Journal of Comparative Neurology and Psychology, 18, 459-482.

APPENDIX A

Performance/Goal Chart



APPENDIX B

Anagram List

Pretest

1. NRBNAE *BANNER*
2. LTLTIE *LITTLE*
3. DANREG *GARDEN / DANGER*
4. SATBEK *BASKET*
5. POTCEK *POCKET*
6. FOEEFC *COFFEE*
7. UDONGR *GROUND*
8. GUHRNE *HUNGER*
9. YHRCER *CHERRY*
10. UBMENR *NUMBER*

Trial 1

1. MORFLA	*FORMAL*	16. DSLHEI	*SHIELD*
2. ADECNL	*CANDLE*	17. YIAFML	*FAMILY*
3. RYMHHT	*RHYTHM*	18. LEETPM	*TEMPLE*
4. WRANOR	*NARROW*	19. TURHLE	*HURTLE*
5. NRGAEO	*ORANGE*	20. DRENGE	*GENDER*
6. EIEDDC	*DECIDE*	21. DANOWR	*ONWARD*
7. NGILEJ	*JINGLE*	22. ARLLYE	*REALLY*
8. ELMDWI	*MILDEW*	23. MRIETB	*TIMBER*
9. APTNEU	*PEANUT*	24. TKACER	*RACKET*
10. SANIIR	*RAISIN*	25. WOEHRS	*SHOWER*
11. MOLRAN	*NORMAL*	26. DDLERA	*LADDER*
12. PCYCOU	*OCCUPY*	27. LCNCAE	*CANCEL*
13. GEEAUL	*LEAGUE*	28. LEPAAC	*PALACE*
14. RLUPLA	*PLURAL*	29. BETTLA	*TABLET*
15. UNARTE	*NATURE*	30. PARTCE	*CARPET*

Trial 2

1. LNEEED	*NEEDLE*	16. TRBABI	*RABBIT*
2. EFNOFD	*OFFEND*	17. RNEEKL	*KERNEL*
3. CNCESI	*SCENIC*	18. DNLAEH	*HANDLE*
4. THHEGI	*HEIGHT*	19. KENYOD	*DONKEY*
5. GOTUEN	*TONGUE*	20. IFRDFE	*DIFFER*
6. YINKED	*KIDNEY*	21. OCNEDS	*SECOND*
7. HRISTT	*THIRST*	22. OKTRCE	*ROCKET*
8. NDORGA	*DRAGON*	23. NDOELG	*GOLDEN*
9. AEECRR	*CAREER*	24. BAGMEL	*GAMBLE*
10. REECIP	*PIERCE*	25. NHSOTE	*HONEST*
11. ENLCAG	*GLANCE*	26. TENNIY	*NINETY*
12. ZZUELM	*MUZZLE*	27. RMEULB	*LUMBER*
13. KAJETC	*JACKET*	28. TRIALU	*RITUAL*
14. FTAEYS	*SAFETY*	29. PCUABH	*HUBCAP*
15. NIICCP	*PICNIC*	30. TGNHIK	*KNIGHT*

Trial 3

1. GESNID	*DESIGN*	16. TAEBLL	*BALLET*
2. UMRTAE	*MATURE*	17. OCIHCE	*CHOICE*
3. SECEHE	*CHEESE*	18. COROTD	*DOCTOR*
4. LETENG	*GENTLE*	19. RAMMEH	*HAMMER*
5. AOSFMU	*FAMOUS*	20. OEPELP	*PEOPLE*
6. SENLSO	*LESSON*	21. BAELRM	*MARBLE*
7. BRBREA	*BARBER*	22. EBLARR	*BARREL*
8. CPILEN	*PENCIL*	23. RECLIC	*CIRCLE*
9. OLTSCE	*CLOSET*	24. RNIDNE	*DINNER*
10. THEHAL	*HEALTH*	25. MNAIRG	MARGIN
11. NOOLIT	*LOTION*	26. LREETT	*LETTER*
12. RWABRO	*BARROW*	27. DEERLA	*LEADER*
13. EUIRGF	*FIGURE*	28. LWLFOO	*FOLLOW*
14. PRNTEA	*PARENT*	29. NOIURJ	*JUNIOR*
15. TINETK	*KITTEN*	30. KILCNE	*NICKEL*

APPENDIX C

Participation Consent Letter

Read this consent form. If you have any questions ask the experimenter and she will answer the question.

You are invited to participate in a study investigation the goal setting theory. Information obtained in this study will be identified only by code number. Your name will be used only to indicate that you participated in the study and received extra credit or course credit for participating. Extra credit and course credit will be given to subjects who complete 75% of the study.

Your participation in this study is completely voluntary. Should you wish to terminate your participation, you are welcome to do so at any point in the study. There is no risk or discomfort involved in completing the study. If you have any questions or comments about this study, feel free to ask the experimenter. This experiment will take approximately 1 hour and 15 minutes.

Thank you for your participation.

I,_____, have read the above information and have
(please print name)
decided to participate. I understand that my participation is voluntary and that I may withdraw at any time without prejudice after signing this form should I choose to discontinue participation in this study.

_____ _____
(signature of Participant) (date)

_____
(signature of Experimenter)

THIS PROJECT HAS BEEN REVIEWED BY THE EMPORIA STATE UNIVERSITY COMMITTEE FOR THE PROTECTION OF HUMAN SUBJECTS

APPENDIX D

Eysenck Personality Inventory

EYSENCK PERSONALITY INVENTORY

FORM A

By H. J. Eysenck
and Sybil B. G. Eysenck

Name_____ Age_____ Sex_____

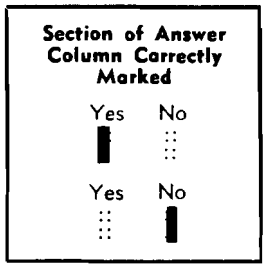
Grade or Occupation _____ Date_____

School or Firm_____ Marital Status_____

INSTRUCTIONS

Here are some questions regarding the way you behave, feel and act. After each question is a space for answering "Yes," or "No."

Try and decide whether "Yes," or "No" represents your usual way of acting or feeling. Then blacken in the space under the column headed "Yes" or "No."



Work quickly, and don't spend too much time over any question; we want your first reaction, not a long drawn-out thought process. The whole questionnaire shouldn't take more than a few minutes. Be sure not to omit any questions. Now turn the page over and go ahead. Work quickly, and remember to answer every question. There are no right or wrong answers, and this isn't a test of intelligence or ability, but simply a measure of the way you behave.

PUBLISHED BY EDUCATIONAL AND INDUSTRIAL TESTING SERVICE
BOX 7234, SAN DIEGO, CALIFORNIA 92107

EPI 001

E N L

1. Do you often long for excitement? Yes No
2. Do you often need understanding friends to cheer you up? Yes No
3. Are you usually carefree? Yes No
4. Do you find it very hard to take no for an answer? Yes No
5. Do you stop and think things over before doing anything? Yes No
6. If you say you will do something do you always keep your promise, no matter how inconvenient it might be to do so? Yes No
7. Does your mood often go up and down? Yes No
8. Do you generally do and say things quickly without stopping to think? Yes No
9. Do you ever feel "just miserable" for no good reason? Yes No
10. Would you do almost anything for a dare? Yes No
11. Do you suddenly feel shy when you want to talk to an attractive stranger? Yes No
12. Once in a while do you lose your temper and get angry? Yes No
13. Do you often do things on the spur of the moment? Yes No
14. Do you often worry about things you should not have done or said? Yes No
15. Generally do you prefer reading to meeting people? Yes No
16. Are your feelings rather easily hurt? Yes No
17. Do you like going out a lot? Yes No
18. Do you occasionally have thoughts and ideas that you would not like other people to know about? Yes No
19. Are you sometimes bubbling over with energy and sometimes very sluggish? Yes No
20. Do you prefer to have few but special friends? Yes No
21. Do you daydream a lot? Yes No
22. When people shout at you, do you shout back? Yes No
23. Are you often troubled about feelings of guilt? Yes No
24. Are all your habits good and desirable ones? Yes No
25. Can you usually let yourself go and enjoy yourself a lot at a lively party? Yes No
26. Would you call yourself tense or "highly-strung"? Yes No
27. Do other people think of you as being very lively? Yes No
28. After you have done something important, do you often come away feeling you could have done better? Yes No
29. Are you mostly quiet when you are with other people? Yes No
30. Do you sometimes gossip? Yes No
31. Do ideas run through your head so that you cannot sleep? Yes
32. If there is something you want to know about, would you rather look it up in a book than talk to someone about it? Yes
33. Do you get palpitations or thumping in your heart? Yes
34. Do you like the kind of work that you need to pay close attention to? Yes
35. Do you get attacks of shaking or trembling? Yes
36. Would you always declare everything at the customs, even if you knew that you could never be found out? Yes
37. Do you hate being with a crowd who play jokes on one another? Yes
38. Are you an irritable person? Yes
39. Do you like doing things in which you have to act quickly? Yes
40. Do you worry about awful things that might happen? Yes
41. Are you slow and unhurried in the way you move? Yes
42. Have you ever been late for an appointment or work? Yes
43. Do you have many nightmares? Yes
44. Do you like talking to people so much that you would never miss a chance of talking to a stranger? Yes
45. Are you troubled by aches and pains? Yes
46. Would you be very unhappy if you could not see lots of people most of the time? Yes
47. Would you call yourself a nervous person? Yes
48. Of all the people you know are there some whom you definitely do not like? Yes
49. Would you say you were fairly self-confident? Yes
50. Are you easily hurt when people find fault with you or your work? Yes
51. Do you find it hard to really enjoy yourself at a lively party? Yes
52. Are you troubled with feelings of inferiority? Yes
53. Can you easily get some life into a rather dull party? Yes
54. Do you sometimes talk about things you know nothing about? Yes
55. Do you worry about your health? Yes
56. Do you like playing pranks on others? Yes
57. Do you suffer from sleeplessness? Yes

PLEASE CHECK TO SEE THAT YOU HAVE ANSWERED ALL THE QUESTIONS.

APPENDIX E

Goal Acceptance Measure

The assigned goal for this experiment is to solve 9 anagrams.

Please sign your name if you have read, understood, and agreed to the specified goal stated above.

_____ _____

(Participant's signature) (Date)

APPENDIX F

Self-efficacy Measure

Please circle your answer to the following question using the scale below.

How confident are you in your ability to achieve the assigned goal?

1) very unconfident
2) moderately unconfident
3) slightly unconfident
4) neither unconfident or confident
5) slightly confident
6) moderately confident
7) very confident

APPENDIX G

Goal Commitment Measure

Please circle your answer to the following question using the scale below.

How committed are you to achieving the assigned goal?

1) very uncommitted
2) moderately committed
3) slightly uncommitted
4) neither uncommitted or committed
5) slightly committed
6) moderately committed
7) very committed

APPENDIX H

Task Specific Anxiety Measure

Please use the appropriate scale to indicate how you felt while working on the anagrams

1) I felt ...
   1) very calm
   2) moderately calm
   3) slightly calm
   4) neither calm or excitable
   5) slightly excitable
   6) moderately excitable
   7) very excitable

2) I felt ...
   1) very relaxed
   2) moderately relaxed
   3) slightly relaxed
   4) neither relaxed or tense
   5) slightly tense
   6) moderately tense
   7) very tense

3) I felt ...
   1) very serene
   2) moderately serene
   3) slightly serene
   4) neither serene or high strung
   5) slightly high strung
   6) moderately high strung
   7) very high strung

APPENDIX I

Task Complexity Measure

Please use the appropriate scale to indicate your reaction to the anagram task.

1) The anagram task was ...
   1) very easy
   2) moderately easy
   3) slightly easy
   4) neither easy or difficult
   5) slightly difficult
   6) moderately difficult
   7) very difficult

2) The anagram task was ...
   1) very dull
   2) moderately dull
   3) slightly dull
   4) neither dull or exciting
   5) slightly exciting
   6) moderately exciting
   7) very exciting

3) The anagram task was ...
   1) very routine
   2) moderately routine
   3) slightly routine
   4) neither routine or varied
   5) slightly varied
   6) moderately varied
   7) very varied

I, Teresa J. Wedel, hereby submit this thesis to Emporia State University as partial fulfillment of the requirements for an advanced degree. I agree that the Library of the University may make it available for use in accordance with its regulations governing materials of this type. I further agree that quoting, photocopying, or other reproduction this document is allowed for private study, scholarship (including teaching) and research purposes of a nonprofit nature. No copying which involves potential financial gain will be allowed without written permission of the author.

Teresa J. Wedel

Signature of Author

7/2/96

Date

The effects of Feedback in Situations of High Anxiety

Thesis Title

Mary Cooper

Signature of Graduate Office

7-8-96

Date Received