

AN ABSTRACT OF THE THESIS OF

Sean A. Balke for the Master of Science

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Abstract approved: 

This study investigated the effects of leadership style and goal setting method on group task performance and satisfaction. Participants were 56 college students enrolled in an introductory psychology course at a mid western university. Participants were assigned to groups that competed in a 20 questions activity and completed a group task satisfaction questionnaire designed for this study. Results indicated that participative leadership improves a group's task satisfaction and is most effective at increasing performance measures related to efficiency, rather than overall performance. In terms of degree of influence, goal setting method has a greater effect on performance while leadership has a greater influence on group task satisfaction. Finally, the combined effects of leadership style and goal setting method can be additive, with directive leadership proving superior when combined with assigned or do-your-best goal setting conditions.

**THE EFFECTS OF LEADERSHIP STYLE AND GOAL SETTING METHOD ON  
GROUP TASK PERFORMANCE AND SATISFACTION**

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**A Thesis**

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**the Department of Psychology and Special Education**

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**Master of Science**

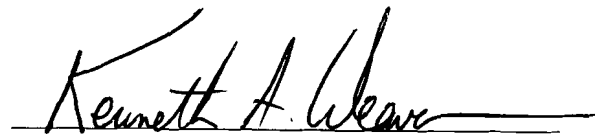
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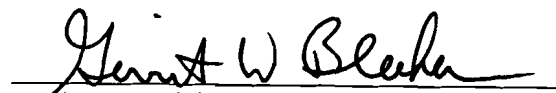
**Sean A. Balke**

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Psychology and Special Education



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## CHAPTER 1

### INTRODUCTION

Around the world, people are being asked or required to do “more with less” in nearly every aspect of their lives, most notably in their work. As long as there are businesses to be run, leaders will undoubtedly face challenges over what methods are most effective at boosting their employee’s productivity (Latham & Locke, 1979). All managers want to increase their workers’ levels of satisfaction and performance because productivity is the very core of the dynamic activity called leadership and is essential for an organization’s survival (Curtis, 1994; Locke & Latham, 1984). Moreover, the growing use of work groups in organizations to make critical decisions and accomplish work extends this need beyond the individual worker to include work groups and teams (Kahai, Sosik, & Avolio, 1997; Peterson, 1997). Individuals are more frequently working together on committees, crews, circles, or groups to address staffing, quality, product development, and other business needs (Goodman, Ravlin, & Schminke, 1987). In light of this, the search is on for “levers” to cognitive, affective, and behavioral actions that operate inside a person, as well as those that operate externally within the organizational context (Lawson & Shen, 1998).

The attractiveness of these levers likely stems from the notion that they provide a partial answer to the questions: Why do some people perform better at work tasks than others? Why are some people more satisfied with their work tasks than others? This of course may be eminently important to organizations seeking maximum performance and satisfaction from their employees. Many factors internal and external to an organization that contribute to this goal have been studied but at the forefront are basic motivational

issues and managerial or leadership performance. A plethora of theories exist to explain this complex relationship, yet none has done a better job than the relatively simple theory of goal setting (Curtis, 1994). This theory has proven effective and feasible to resolve motivation problems. Additionally, success in influencing people and developing commitment to task objectives is an important determinant of managerial success (Locke, 1978). In fact, Locke and Latham (1990) state that goal setting and goal attainment may be “at the core of this phenomenon” (p. 290). This conceptual linkage is the foundation for the present study.

The research illustrating the effectiveness of goal setting as a motivational lever in the workplace is voluminous (Locke & Latham, 1984, 1990, 2002), and the core findings of individual goal setting research are supported at the group level (Whitney, 1994). However, the research on leadership style within the goal-setting framework is limited (Sagie, 1996). Further research is needed to determine which types of leadership behaviors are most effective when coupled with specific goal setting methods. This study examined how directive versus participative leadership styles interact or combine with participative, assigned, or do-your-best goal setting interventions to influence group task satisfaction and performance. By coupling different goal setting conditions with varying leadership treatments, subsequent group performance and satisfaction should offer evidence to support one combination over another. Through this, an increased understanding of the interactions between how goals are set and the type of leadership style used to promote the goals’ attainment should be acquired. This understanding will complement the present knowledge base in the search for effective managerial and

leadership practices and contribute to the overall comprehension of the complex process of human motivation in the workplace.

### Review of the Literature

This review focused on the relevant concepts for the present study from leadership and goal setting theory that may influence group performance and satisfaction. These concepts include: (a) goal setting theory as a motivational lever and the methods used to set goals, (b) directive and participative leadership styles, (c) group task performance, and (d) group task satisfaction.

#### *Goal Setting*

*Goal setting as a motivational lever.* Traditional means of influence such as authority, threats, and fear actuate employee behavior (Arnold & Krapels, 1996) as can unvalidated theories of stress and tension (Kristie, 1998), but motivation provides an alternative that is both more effective and longer-lasting. Motivation is defined as “forces within (dispositional or endogenous) or outside (situational or exogenous) an individual or group that initiate, direct, and sustain action toward a goal or set of goals” (Lawson & Shen, 1998, p. 117). Goal setting is more effective than alternative methods and may be the prominent mechanism by which other strategies affect motivation (Curtis, 1994; Latham & Locke, 1979; Locke & Latham, 1984, 1990, 2002).

Goal setting theory integrates expectancy theory (Vroom, 1964) and social-cognitive theory (Bandura, 1986) to explain and predict goal-oriented behavior in observable and measurable ways. According to Curtis (1994), goal setting theory has demonstrated more scientific validity than any other theory or approach to work motivation. The major findings of the theory are based on data from over 40,000 subjects

from eight countries; 88 different tasks; varying types of performance measures; laboratory and field settings; experimental and correlational designs; immediate to three year time spans; studies of assigned, do-your-best, and participatively set goals; and data from individual, group, and organizational analysis (Locke & Latham, 1990). Moreover, goal setting studies conducted either in the laboratory or in the field are generalizable to many organizational settings (Locke, Shaw, Saari, & Latham, 1981; London, Mone, & Scott, 2004). For example, Corrigan and Garman (1999) reported that transactional leadership skills such as goal setting were identified as techniques that enhanced leader effectiveness in mental health and rehabilitation teams. In addition, goal setting increases productivity in workers whose primary job responsibilities include finding items on the internet (Thompson, Meriac, & Cope, 2002).

Goal setting is effective among all races, unionized and non-unionized employees, males and females, the young as well as the old, and people who are highly educated to those with a very poor education; to sum it up, goal setting works on all types of people (Locke & Latham, 1984, 1990, 2002). It appears goals can be set for nearly any action or result that is somehow verifiable or measurable, and since most things that meet these qualifications exist in a measurable amount, there may be no limit to what goal setting can be applied to. The hard part becomes knowing how to set goals that are appropriate and understanding what leadership style will effectively relate those goals to the individual and organization's objectives to enhance performance.

The effectiveness of this theory is most likely due to its two basic performance predictions. First, difficult goals lead to better performance than easy goals or no goals (Klien, Whitener, & Illgen, 1990; Latham & Locke, 1979; Yukl & Latham, 1978).

Second, specific goals lead to better performance than vague goals (Locke, 1991; Locke, Shaw, Saari & Latham, 1981). Hinsz (1995) found this to be true for both individuals and groups performing additive tasks that required them to consider their performance on previous tasks before setting future goals. This effect was also supported at the group level for teams performing an interdependent task (Whitney, 1994).

Additional research indicates that these goal effects may be mediated by different factors. Most notably, the participant's or group's self-esteem or expectations of being able to achieve certain performance levels and the valence or attractiveness of those performance levels impacted performance (Silver & Bufanio, 1996; Weiss, Suckow, & Rakestraw, Jr., 1999). Additionally, Mesch, Farh, and Podsakoff (1994) manipulated the type of feedback groups received during multiple trials of a word recognition task. Groups were exposed to positive or negative feedback between task trials. Groups receiving negative feedback actually set higher goals and attained better performance than the groups provided positive feedback. The negative feedback did have the opposite effect on group satisfaction. All things considered, goal setting is an effective and manageable lever to help leaders motivate employees toward the achievement of individual, group, and organizational objectives. The need for such a valid theory is striking, as corporations spend more money on motivational products than the U.S. government spends on educational programs, and relevant subject matter accounts for 3.6% of all book sales nationwide (Clarke, 1998).

*Goals.* Generally, a goal is an idea of a future or desired end state or object that a person aims toward at some point in the future (Lawson & Shen, 1998; Locke & Latham, 1984, 1990). It can also refer to the attainment of a specific standard or level of

proficiency at a given task, usually within a specified period of time (Locke & Latham, 1990). Despite attempts for more specific operational definitions, the term remains a generic concept that embodies the meanings of other terms such as intention, task, deadline, purpose, aim, end, and objective. Still, they all share the common element of future oriented achievement.

Goals also possess two main attributes: content and intensity (Locke & Latham, 1990). A goal's content may refer to the object or result desired; it could be anything in the external world as well as emotions such as happiness, anxiety, or self-esteem. This content can vary quantitatively or qualitatively along with the degree of specificity or clarity. A goal's second dimension, intensity, refers to such factors as "the scope and integration of the goal setting process, the effort required to form the goals, the place of the goal in the individual's goal hierarchy, the degree to which the individual is committed to the goal, and the importance of the goal" (Locke & Latham, 1990, p. 26). The goals used in the present study will address both attributes by focusing on specific goal content and intensity through the goal setting process.

*Goal setting methods.* Goal difficulty and specificity affect performance. Another factor that determines the effectiveness of goals is whether the goals are assigned, participatively set, or do-your-best. Evidence differs as to how goals should be set to maximize the utility of the approach (Locke, Latham & Erez, 1988). This conflict develops when one is concerned with the impact on performance and satisfaction, rather than performance alone.

When the focus is solely on performance, the evidence is generally in agreement that do-your-best goals are less effective (Mitchell & Dorsett, 1978). Locke and Latham

(1990) reported that individuals assigned difficult goals tend to set higher personal goals, and higher personal goals lead to better performance. This effect is reported in virtually all goal setting research and was replicated by Harkins and Lowe (2000), who examined the effects of assigned and do-your-best goals on task performance. Participants were asked to generate as many uses as they could for common objects. The participants who were assigned goals produced significantly more uses than did the participants in the do-your-best condition. Participants who set their own goals typically select easier goals that are below the level necessary to produce the goal setting effect (White, Kjelgaard, & Harkins, 1995). Some researchers advocate the strategy of introducing an arbitrary but high anchor goal first to increase the level of subsequent do-your-best goals set by participants, thereby mitigating the effect of goals that are too easy and ensuring goals are set at a level that produces similar levels of performance when compared to assigned goals (Hinsz, Klanbach & Lorentz, 1997). On the other hand, a different study that investigated this same effect found that assigned or anchor goals might influence later do-your-best goals in the opposite direction. That is, if the original assigned or anchor goal is difficult, the subsequent do-your-best goals set by participants will be easier, resulting in lower performance (Locke, Frederick, Buckner & Bobko, 1984).

When goal setting method is examined at the group level, the significant effect of assigned goals becomes clear. Whitney (1994) compared groups that were assigned difficult, moderate, or do-your-best goals when completing a group task. As predicted, groups assigned difficult goals performed better than the moderate or do-your-best groups. Additionally, groups performing an error correction task performed better in an assigned goal condition than in a self-set or no goal condition (Hinsz, 1995). These



results at the group level support the traditional findings in the individual goal setting literature that specific assigned goals generally produce higher levels of performance than do-your-best goals.

The same cannot necessarily be said for the role participative or assigned goals play in promoting higher levels of performance. Locke and Latham (1990) reported a somewhat surprising finding that assigned goals typically lead to similar levels of commitment and performance as do goals that are set participatively. This result was attributed to the strong influence of assigned goals rather than any deficiency in the participative process. Furthermore, Sagie (1996) found mixed results for these methods depending on the performance measure considered. Participative goals fared better for correct solutions generated in a problem solving activity. Yet when number of questions and time duration were considered as performance measures, the assigned condition performed better. Similarly, Latham and Yukl (1976) found that the amount of subordinate participation was not as important as the actual setting of the goal itself for secretaries in a large corporate setting. Conversely, participatively set goals can lead to better performance and higher rates of goal attainment (Erez & Arad, 1986; Latham & Saari, 1979; Latham & Yukl, 1975). When subjects were allowed to help set their own goals, high commitment and high performance resulted (Erez, Gopher & Arzi, 1990). When goal difficulty is held constant among groups, those who have had goals assigned to them seem to perform about as well as those who participated in setting their own goals (Latham, Steele, & Saari, 1982; Locke & Latham, 2002). Nevertheless, the same studies reported that participation in goal setting promotes a greater understanding of how

to achieve the task requirements, which in itself may increase self-confidence and contribute to superior job performance.

Similar to the results found regarding performance, do-your-best or no goal conditions generally produce lower levels of satisfaction than do assigned or participatively set goal conditions (Phillips & Freedman, 1988). Das and Shikdar (1988) offered further support for this effect by reporting that both assigned and participative goals produced significantly higher levels of satisfaction than did a no goal condition for participants completing a repetitive production task. At the same time they found that participative and assigned goals worked equally as well for improving satisfaction when a feedback component was included. An exception to these findings was reported by Hinsz (1995) where groups in self-set goal conditions were significantly more satisfied with their performance and with the goal itself than groups in the assigned or no goal conditions. An explanation for this effect can be gleaned from the existing goal setting literature which holds that reactions to performance or goals themselves can be conditioned by whether or not they achieve the goal. In the Hinsz study, participants in the self-set condition were 95% likely to achieve their goal, while those in the assigned condition were only 84% likely to achieve the goal.

Results would suggest the same pattern as task performance. However, there is additional support for the idea that participation in the goal setting or decision making process leads to improved satisfaction. Pearson (1987) found that incumbents who were engaged in participative goal setting reported feelings of increased involvement in decision making processes and higher satisfaction. This idea was supported in a more general sense by the research of Ostrom and Rabbie (1995). Their findings revealed that

individuals and groups reported higher levels of task satisfaction when they worked in environments that afforded high levels of participative decision making between the leader and the work groups. In a study that focused very specifically on the method used to set goals, Sagie (1996) manipulated the goal setting process to include assigned, participative, and do-your-best goal conditions. The study found participative goal setting to be significantly more effective at producing higher satisfaction over the assigned goal setting method. The highest rates of goal commitment, task interest, and task satisfaction were achieved when goals were set in a participative manner. Moreover, the assigned goal method produced significantly lower satisfaction and performed just as poorly as the do-your-best condition.

This evidence provides strong support for the notion that the method used to set goals will have an impact on the affective reactions of those involved in the process. Still, other studies revealed no significant differences between any of the three goal setting conditions and satisfaction and actual performance (Dosset, Latham, & Mitchell, 1979; Latham & Marshall, 1982). However, goal acceptance and actual goal attainment were higher in the assigned condition as opposed to the participative condition (Dosset et al., 1979). Additionally, whether the task is enriched or not may mediate the effect that goal setting method has on satisfaction (Roberson, Korsgaard, & Diddams, 1990), as well as the discrepancy between actual performance on a task and the goal that was set for the task (Kernan & Lord, 1991). Conceptually, there are a number of reasons why performance and satisfaction may be higher when individuals are involved in the setting of goals. First, participatively set goals may be more realistic than those assigned by others and more valuable than goals set alone or not set at all. Second, a leader recognizes

a subordinates' ability to contribute by encouraging their participation, thereby increasing their self-efficacy and fulfilling their higher order need for respect and recognition (Bandura, 1997). Third, a worker who has participated in goal setting is more likely to become ego-involved and committed to the successful attainment of the goals (Locke & Latham, 2002; Pinder, 1984). Finally, participation in the process can lead to more perceived feelings on involvement, influence, and responsibility for outcomes (Oostram & Rabbie, 1995). Given support for the efficacy of both assigned and participative goal setting, it appears difficult to refute either approach. This study will attempt to add to the understanding of how these factors influence the overall goal setting technique.

#### *Directive vs. Participative Leadership Styles*

The main purpose of leadership is to organize and direct a group toward the attainment of mutual goals on a particular task (Souza & Klein, 1995). A manager's or leader's ability to influence people at work is paramount to their effectiveness, which in turn impacts their employing organization's success. The type of leadership behavior a manager displays may depend on the type of organization, the structure of the subordinates' tasks, and the skill and education level of employees (Griffin, 1979). The amount of directiveness, supportiveness, and participation they offer to subordinates may also depend greatly on the type of motivational interventions their particular organization employs. While many leadership theories have been developed for virtually every conceivable workplace situation, only limited research has examined how two basic types, directive and participative, interact with goal setting to influence performance and satisfaction (Sagie, 1996). These two fundamental types of leadership were chosen for

examination in this study due to their historical prevalence and popularity as well as their relevant linkage to the goal setting and group management process.

A historical analysis of the leadership literature and subsequent confirmatory factor analysis conducted by Pearce et al. (2003) supported the existence of four leadership types: directive leadership, transactional leadership, transformational leadership, and participative (empowering) leadership. Within this typology, each of the four types has its own specific grouping of leader behaviors that distinguish it from the others. Directive leadership is characterized by positional and legitimate power that uses high levels of strict direction and command to control and influence subordinate behavior. Transactional leadership focuses on modifying subordinate perceptions of the contingent material and personal rewards they receive for higher or lower levels of work contributions, in essence, exchanging rewards for work performance. Transformational leadership employs methods that are intended to stimulate and inspire subordinates to achieve higher performance through their own growth and commitment to a common mission. Participative leadership utilizes an empowering style that encourages participation, teamwork, and self-leadership. Of the four types, directive and participative leadership types have specific behavioral components that link the style to goal setting. For example, a behavioral component of the directive style includes issuing and assigning goals, whereas the participative style involves the process of engaging subordinates in participative goal setting. When considered within the group dynamic, these two leadership styles become critical to the effectiveness of group processes and outcomes.

“A leader provides rules and resources for interaction through task related directions and feedback” (Kahai, Sosik, & Avolio, 2004, p. 68). Those directions and

feedback in turn determine the quality or effectiveness of the process the group uses to achieve its goals. In other words, leaders can have a significant impact on group effectiveness through their influence on the flow and processing of information. Peterson (1997) looked at process and outcome directiveness behaviors for group leaders and reported that a leader has a much more significant impact on group performance through the application of a directive style to the process of decision making rather than the actual outcome. Further support for the salience of leaders impacting process over outcome was provided by Cruz, Henningsen, and Smith (1999) who reported that directive leaders can actually have a negative impact on group decisions when they are focused on controlling the actual outcome. Therefore, the present study examined leadership style as it relates to the directive or participative behaviors that influence group processes.

*Directive leadership.* The basis for the directive leadership type comes from Theory X management style, initiating structure types of leader behavior, task oriented types of leader behavior, and punishment research (Pearce et al., 2003). The style relies on tight control mechanisms that utilize positional or legitimate and coercive power to achieve goals and is characterized by a leader who uses direction, commands, assigned goals, intimidation, and reprimand with subordinates to influence their behavior (Pearce et al. 2003). Bass (1990) and Yukl (1989) defined directive leader behaviors as initiating activity of the work group; organizing group activity; defining, in detail, the way work is done; establishing clear channels of communication; emphasizing goal attainment; assigning tasks to subordinates; coordinating activities of subordinates; making important decisions without consulting subordinates; criticizing poor work; and ensuring that subordinates follow procedures. This is supported by additional research that associated

directive leadership with letting subordinates know what is expected of them, giving specific guidance as to what should be done and how it should be done, making their part in the group understood, scheduling work to be done, maintaining definite standards of performance, and asking adherence to standard rules and regulations (Griffen, 1979; Sagie, 1994). Given that the present study examined how this leadership style impacts performance and satisfaction through its influence on group processes, directive leadership was considered in the context that “directive leadership aims to guide followers’ participation and is defined as providing and seeking compliance with directions for accomplishing a problem solving task” (Kahai et al., 2004, p. 71).

*Participative leadership.* Participative leaders allow much greater participation among group members, are more participative in the group actions themselves, and encourage more autonomy in determining performance standards and other aspects of the job and work environment (Griffen, 1979; Sagie, 1994). Tying this back to the typology developed by Pearce et al. (2003), I align participative leadership most closely with the empowering leadership type that is founded in behavioral self management, social cognitive theory, cognitive behavioral modification research, and participative goal setting research. The behaviors identified in the same study included open communication, encouraging opportunistic thinking, participative goal setting, self-problem solving, and teamwork. Given Yukl’s (1998) typology, this leadership type is closely aligned with consulting, supporting, delegating, developing, mentoring, managing conflict, and teambuilding behaviors (Pearce et al., 2003). Once again considering that the present study examined how this style of leadership impacts performance and satisfaction through its influence on group processes, participative leadership was

considered in the context that “participative leadership aims to increase followers’ participation and is defined as the equalization of power and sharing of problem solving with followers by consulting them before making a decision” (Kahai et al., 2004, p. 71).

Both leadership styles have their place in organizational settings, but the one that is most effective when used with goal setting has yet to be determined. The path-goal theory of leadership (Evans, 1970) explains that leaders will be effective by making rewards available to employees and by making these rewards contingent upon performance. Furthermore, a primary function of the leader involves clarifying for the subordinate the kinds of behavior that will lead to goal accomplishment and valued rewards. Hence, the leader should be concerned with clarifying the paths to goal attainment, that is, to be a directive leader. Sagie (1996) examined the effect that a directive leader can have on groups performing a problem-solving activity and found that the directive leader had a significant impact on the measures of performance when compared to leaderless groups. Moreover, all team performance indicators improved when the degree of leader directiveness increased. A somewhat unexpected finding in the study showed that both satisfaction with the task and satisfaction with team achievement improved significantly with higher leader directiveness. This result was consistent with Locke and Latham’s (1990) finding that when participants perform well, they feel satisfied with their performance and also generalize that satisfaction to the task. Yet other researchers have found that a less directive approach, one that fosters leader-subordinate involvement in setting performance standards, best predicted effort and performance (Klimoski & Hayes, 1980). Additionally, work teams that were led by coordinators (participative leaders) outperformed teams led by commanders (directive leaders) in



computerized battle simulations (Durham, Knight & Locke, 1997). A less directive approach may increase the attitudinal components of the performance process, such as commitment and satisfaction, thereby leading to appropriate goals and greater performance (Mathieu, 1992).

Once again, evidence points in both directions with regard to leadership styles; one may perform as well as the other depending on the situation. Sagie (1997) argued that direction and participation can coincide in a “loose-tight” framework in which leaders closely direct the framework of the task-related interaction with followers (the process), yet allow a great degree of latitude in the group’s decision or output (the outcome). Moreover, he states that recent organizational developments such as the resurrection of work teams and an emphasis on employee empowerment provide an appropriate context for this loose-tight leadership style. It may be that critical elements from each style are needed to improve employee performance and attitudes, depending on the situation. Therefore, further investigation is warranted to clarify how directive or participative leadership styles interact with assigned, participative, or do-your-best goal setting conditions to influence employee performance and satisfaction.

### *Group Performance and Satisfaction*

*Group task performance.* It is common for employees working together on a task to perform more poorly than expected, even when talent and resources available to the group are ample (Woolley, 1998). Considering that nearly 50% of organizations utilize work groups to pursue key organizational outcomes (Devine, Clayton, Philips, Dunford, & Melner, 1999); this observation highlights the need for a technique or process for improving group performance. Goal setting can play an important role in work

motivation and subsequent task performance by impacting goal-directed activities, effort, persistence, and the use of task-relevant knowledge and strategies (Locke & Latham, 2002). Goals help workers to structure their work patterns and minimize distractions to while they work toward goal attainment (Strickland & Galimba, 2001). These goal setting effects are applicable to groups as well as individuals (O'Leary-Kelly, Martocchio, & Frink, 1994), thereby establishing the practice of goal setting as a useful technique to help improve group performance.

In addition to the group's use of goal setting, the nature of the task a group performs can have a powerful impact on the group's performance (Woolley, 1998). A factor that defines the type of task the group conducts is the level of interdependence among group members. Hinsz (1995) defines task interdependence as "the degree that the actions of the group members while performing the task are influenced by the actions (or inactions) of other group members" (p. 967). Said otherwise, group performance can be impacted by the degree to which group members rely on each other to complete the task or even have knowledge of how the others are performing on the task. The interdependency, or lack thereof, that defines a task determines whether it falls into the category of a conjunctive or a disjunctive task. A conjunctive task is one in which each group member must make his or her contribution before the task can be considered complete. A disjunctive task is one in which any one group member can achieve the objective (e.g., correct answer to a problem) or level of performance for the task to be considered complete (Steiner, 1972). When these two task types are considered in relation to goal setting, conjunctive tasks typically result in group goals that are lower than the level individuals would choose for themselves, suggesting that task

interdependence plays a role in group goal decisions (Hinsz, 1995). When task performance is considered, disjunctive tasks have the potential to produce social loafing if individual group members feel their contributions will not be identified (Harkins & Jackson, 1985). Therefore, the present study utilized a disjunctive task situation that ensured group members' contributions would be easily identifiable when examining group performance. These task conditions were chosen to leverage the effect group goals can have on group task performance.

*Group task satisfaction.* Job satisfaction has been an area of interest within the field of organizational psychology for several decades. In general, the satisfaction construct has been found to be positively related to individual performance (Iaffaldano & Muchinsky, 1985; Fisher, 2003), and negatively related to job stress (O'Driscoll & Beehr, 2000), anxiety (Jex & Gudanowski, 1992), and turnover (Judge, 1993). Moreover, low task satisfaction is a situational constraint or obstacle that prevents employees from translating their abilities and motivation into performance (Klein & Kim, 1998) and can nullify what typically are positive leadership effects within the leader/subordinate relationship (Dunegan, Uhl-Bien, & Duchon, 2002). Within the goal setting framework, Locke and Latham (1990) report that the effects of satisfaction on subsequent performance are contingent and indirect, implying that performance is improved only if satisfaction leads to commitment to the organization and to its goals and that those goals contain the necessary characteristics to achieve the goal setting effect. In addition, individuals who approach goal achievement with a higher task versus ego orientation tend to report higher levels of task satisfaction (Hofman & Strickland, 1995).

The prevalence of work groups in the workplace and the expectation that they deliver heightened organizational performance (Devine et al., 1999) necessitate investigating task satisfaction at the group level to uncover potential group level properties (Mason & Griffin, 2002). This group level focus is supported through other fruitful comparisons of individuals working alone with those working in groups that have reported group level effects related to productivity, decision making, turnover, and absenteeism (Cordery, Mueller, & Smith, 1991; Freeman, 1996). Group task satisfaction can be defined as the group's shared attitude toward its task and the associated work environment (Mason & Griffin, 2002). This proposes that the group's satisfaction is impacted by aspects of the shared work environment and the type of task they are completing. Traditionally, group task satisfaction has been investigated by aggregating the individual satisfaction ratings of group members' attitudes toward the task or team (Mason & Griffin, 2002). Mason and Griffin (2003) support the existence of the distinct group-level construct called group task satisfaction that measures attitudes within the group rather than individual attitudes. They asked participants to make ratings on attitudinal items on the basis of "what the level of agreement would be in your group as a whole" (p. 423) instead of just their own attitudes. The researchers also unintentionally limited the variability in group size (groups ranged from 3 to 5 members), thereby eliminating the potential of confounding the results with group size.

This new construct displayed within-group agreement and significant between-group variance and provided discriminant validity for group task satisfaction over other existing groups constructs, such as group climate, group potency, social cohesion, and task cohesion. Furthermore, group task satisfaction was significantly related to

performance quality for the group, whereas aggregated individual satisfaction was not, supporting the notion that the relationship between satisfaction and performance may be stronger when measured using the group task satisfaction construct. These findings, along with the potential benefit of exposing effects unique to the group level using this construct, supported the use of group task satisfaction to measure group attitudes in the present study.

### The Present Study

The present study examined the effects of assigned, participative, or do-your-best goal setting methods and directive and participative leadership styles on group task performance and group task satisfaction. By coupling different goal setting conditions with varying leadership treatments, I expected that subsequent group task performance and satisfaction would offer evidence to support one combination of these variables over another. This study replicated and extended the research conducted by Sagie (1996) by examining similar independent and dependent variables in an American rather than Israeli population. In addition, the present study attempted to reveal significant differences in performance outcomes between groups with high and low directive leaders, rather than just between high and low directionally-led groups and leaderless groups. Through this, an increased understanding of the interactions between how goals are set and the type of leadership style used to promote the goals' attainment was expected to be gained. This understanding complemented the present knowledge base in the search for effective leadership practices and contributed to the overall comprehension of the complex process of human motivation in the workplace.

### *Hypotheses*

The present study investigated the following hypotheses:

Hypothesis 1(a): Groups with assigned and participatively set goals achieve higher levels of overall performance in terms of correct problem solutions than groups with do-your-best goals.

Hypothesis 1(b): Groups with assigned and participatively set goals achieve higher levels of performance in terms of fewer questions and guesses than groups with do-your-best goals.

Hypothesis 1(c): Groups with assigned and participatively set goals achieve higher levels of performance in terms of less time to identify the correct solution than groups with do-your-best goals.

This result was expected to be consistent with the existing goal setting literature. Assigned goals generally produce better performance than do the best goals for both individuals and groups. Additionally, participants that participate in the goal setting process tend to have an increased level of commitment to the goal and task, resulting in similar levels of performance as those with assigned goals (Erez et al., 1990; Latham et al., 1982).

Hypothesis 2: Groups in participatively set and do-your-best goal conditions have higher levels of task satisfaction than groups in the assigned condition.

This result was expected to be consistent with the research by Sagie (1996), Hinsz (1995), and Oostram and Rabbie (1995), in which individuals and groups reported higher levels of task satisfaction when they participated in the goal setting process.

Hypothesis 3(a): Groups with directive leaders achieve higher levels of overall performance in terms of correct problem solutions than groups with participative leaders.

Hypothesis 3(b): Groups with participative leaders achieve higher levels of performance in terms of fewer questions and guesses than groups with directive leaders.

Hypothesis 3(c): Groups with participative leaders achieve higher levels of performance in terms of less time to identify the correct solution than groups with directive leaders.

The result for Hypothesis 3(a) was expected to be consistent with the findings of Sagie (1996, 1997) and Peterson (1997) in which directive leaders adopted a directive task related style to influence and control the group communication process, without controlling the outcome, to achieve higher levels of overall performance. The results for Hypothesis 3(b) and 3(c) was expected to support the “loose-tight” framework posed by Sagie (1997) where group member involvement in decision making is expected to improve performance.

Hypothesis 4: Groups with participative leaders have higher levels of task satisfaction than groups with directive leaders.

Groups allowed to freely communicate and contribute would report higher levels of task satisfaction. Additionally, the use of the new group level construct identified by Mason and Griffin (2003) to measure group task satisfaction was expected to capitalize on the perceptions created through intra-group communication allowed by participative leaders.

Hypothesis 5(a): Leadership style has a more significant effect on overall group performance in terms of correct problem solutions than does goal setting method.

Hypothesis 5(b): Leadership style has a more significant effect on group performance in terms of fewer questions and guesses than does goal setting method.

Hypothesis 5(c): Leadership style has a more significant effect on group performance in terms of less time to identify the correct solution than does goal setting method.

Hypothesis 6: Goal setting method has a more significant effect on group task satisfaction than does leadership style.

The results for Hypothesis 5a, 5b, 5c, and 6 were expected to be consistent with the findings of Sagie (1996) where goal setting method failed to have the same significant effects on performance as did leadership style. In addition, Sagie (1996) and Locke and Latham (1990) found that the process of setting goals was more helpful in improving satisfaction than were the goals themselves.

Hypothesis 7(a): The interactive effects of goal setting method and leadership style are additive. Groups that have a directive leader and use a participative goal setting have the highest overall task performance.

Hypothesis 7(b): The interactive effects of goal setting method and leadership style are additive. Groups that have a directive leader and use a participative goal setting have the highest group task satisfaction.

This result was expected to be consistent with the finding of Sagie (1996) in that leadership style and goal setting method are distinct attributes of the leader-follower relationship and that the combination detailed above would result in better overall performance and better attitudes than conditions using other combinations of the two attributes. Furthermore, this result was expected to provide support for the “loose-tight”



leadership style framework outlined by Sagie (1997) in which leaders tightly control the group processes but remain loose or open to the group decisions and outcomes.

## CHAPTER 2

### METHOD

The present study investigated the influence goal setting method and leadership style exerts on group task performance and satisfaction. Goal setting method and leadership style were manipulated and subsequent performance and attitudinal outcomes were examined. A laboratory experiment was employed to test the hypotheses of interest in the present study.

#### *Participants*

Participants in the present study were 56 undergraduate students attending a mid-western university who were enrolled in an introductory psychology course. Participants received partial course credit for their participation in the study. This sample consisted of 68% female and 32% male students, with ages between 18 and 23 years and a mean age of 18.95 years. The participants reported an average of 3.71 years of work experience and 1.6 years of college education. For a complete description of the demographics of this sample, please refer to Table 1. To ensure the ethical treatment of participants, Institutional Review Board (IRB) approval was granted before research was conducted (see Appendix A). Each student's participation was contingent upon reviewing and signing the informed consent document, which outlined the study's purpose, procedures, risks, and benefits (see Appendix B).

#### *Measures*

*Leadership style manipulation.* The effectiveness of the leadership style manipulation (directive or participative) was evaluated by a single item questionnaire administered at the completion of the activity but before participants were debriefed (see

Table 1

*Demographic Characteristics of Participants*

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Group	Number of Participants
<b>Gender</b>	
Male	18
Female	38
<b>Age (years)</b>	
18	30
19	12
20	7
21	2
22	4
23	1
<b>Year in college</b>	
Freshmen	35
Sophomore	11
Junior	7
Senior	3

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Table 1 (continued).

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Group	Number of Participants
<b>Work experience (years)</b>	
0 – 1	7
2 – 3	23
4 – 5	16
6 – 7	4
8 – 9	5
10 +	1

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Appendix C). In addition to a verbal review of the two styles by the experimenter, the questionnaire provided a description of the characteristics and behaviors associated with each leadership style. All participants were asked to respond to the question: “How would you rate the leadership style exhibited by your group leader?” on a 7-point scale ranging from extremely participative (1) to extremely directive (7).

*Goals and task performance scores.* Group performance goal information captured for the assigned and participative treatment groups included the total number of questions and guesses per trial and the elapsed time to solve each problem in minutes and seconds. This information was captured on the top section of the data recording form designed for this study (see Appendix D). Measures of actual group task performance included: a) percentage of correct solutions (overall performance), b) mean number of questions and guesses per trial, and c) mean time elapsed until each problem was solved. This performance information was recorded by the experimenter using the data recording form (see Appendix D).

*Group task satisfaction.* Group task satisfaction was measured by a 5-item self-report questionnaire administered after all activity trials had been completed (see Appendix E). The questionnaire items developed for the present study were adapted from the style proposed by Mason and Griffin (2003) who reported an internal reliability of .83 for the scale. The items were developed to fit the present study and designed to assess: (a) the group’s satisfaction with the task (“How satisfied was the group with the activity?”), (b) the goal setting method (“How satisfied was the group with the process used to establish group performance goals or expectations?”), (c) the actual performance goals (“How satisfied was the group with the actual goals or expectations set for the group’s

performance?”), (d) the groups overall performance (“How satisfied was the group with the overall level of performance it achieved in the activity?”), and (e) the leadership style exhibited by the group leader (“How satisfied was the group with the leadership style exhibited by the group leader?”). Participants responded using a 7-point scale that ranged from extremely dissatisfied (1) to extremely satisfied (7).

### *Design*

*Independent variables.* The two independent variables in the study were leadership style (2 levels) and goal setting method (3 levels). All 12 groups were subject to a combination of the two variables (four groups for each goal setting condition; two groups for each leadership style within the goal setting condition). Leadership style consisted of either a high or a low directiveness condition consistent with the behaviors outlined in the literature review for process directiveness. In the low directiveness or participative condition, free and open communication between all members was permitted. In the high directiveness or directive condition, the leader was involved in every team interaction, with all members being allowed to communicate only with the leader for all purposes. The goal setting methods included assigned, participatively set, and do-your-best conditions. The do-your-best groups went first, followed by the participatively set groups to establish a reasonable goal (both for a time goal and question quota goal) to be used with the assigned groups. The experimenter handled the goal setting discussions with the groups and the group leader had no designated role in the goal setting process other than being an equal member of the group. For the do-your-best condition, no specific goals were set but the members were encouraged to complete the task in the least amount of time and questions possible.

*Dependent variables.* Group task performance and group task satisfaction were the dependent variables in this study. Measures of group performance, examined separately, were: (a) number of correct solutions out of three, (b) mean number of questions asked and guesses per trial (including the solution, if applicable), and (c) mean time elapsed until the problem was solved or the 5-minute time limit is reached. All group performance goals and actual performance scores were recorded by the experimenter (see Appendix D). Group task satisfaction was measured by a 5-item self-report questionnaire administered after all trials had been completed (see Appendix E). The questionnaire items were adapted from the style proposed by Mason and Griffin (2003) who asked participants to report attitudes of the group as a whole rather than just their own. The items were developed to fit the present study and designed to assess the group's satisfaction with the task, the goal setting method, the actual performance goals, the groups overall performance, and the leadership style exhibited by the group leader. These ratings combined to form an overall group task satisfaction score.

### *Procedure*

Participants were randomly assigned to one of 12 groups consisting of four to five individuals who had previously been assigned to one of the various experimental conditions by the researcher. Conditions were defined by the combination of leadership style and goal setting method. Before the actual study began, all participants reviewed and signed the informed consent document (see Appendix B). Upon completion of the informed consent form, participants completed a demographic information form that captured their age, gender, year in college, and years of work experience (see Appendix F).

Next, each group participated in a 5 minute ice-breaker activity to help group members get to know one another informally. The experimenter then provided an introduction to the activity and instructions on how to proceed. The two groups then competed with each other (in the same experimental condition) in a modified version of the “Twenty Questions” game (Katzell, Miller, Rotter, & Venet, 1970; Sagie, 1996) in which groups are tasked with identifying a word known only to the experimenter. Each group was asked to guess the identity of four proper or common nouns over one practice and three trial sessions. The group members were told that the problem word would be one of several things, including an article, an animal, a vocation, an activity, or a location (e.g., blender, horse, travel agent, painting, hospital). Problem solutions were unknown to all group members, including the group leader, before beginning the activity and different problem solutions were used for each group session. Goal conditions were implemented after the practice session.

To help ensure consistency in the leadership style manipulation, two male graduate students served as group leaders throughout the experiment. Both graduate students were trained beforehand to demonstrate characteristics and behaviors consistent with the leadership style conditions they were assigned. Men were selected to serve as group leaders due to the finding that men are typically characterized by a more directive leadership style (Brewer, Socha, & Potter, 1996) and to avoid confounding the leadership effects with gender (Kahai et al., 1997; 2004). The group leader was the only team member allowed to communicate with the experimenter and had to approve all action plans and answers. To ensure that the difficulty level of all problem solutions remained constant across groups and sessions, all problem words were taken from lists in the



Oxford Picture Dictionary containing words that are considered to be of the same difficulty level (Fuchs, 1999). The participants were told to try to solve each problem while keeping the time elapsed and questions asked to a minimum. Groups were told that the task was not meant to be competitive in nature. However, to help motivate participants to take the activity seriously and strive for peak performance, a reward incentive of \$5.00 per person was offered to the members of the group that achieved the best performance within each group pairing. Next, the activity began and groups were allowed to ask questions about the problem word to which the experimenter responded with either a “yes” or a “no.” With each subsequent guess, the experimenter added whether the group came closer or went further away from the correct answer. Groups within the same experimental condition worked on the problems in an alternate fashion while the other team observed. After finishing all three activity trials, participants completed the Group Task Satisfaction Questionnaire (see Appendix E) and the Leadership Style Questionnaire (see Appendix C). Participants were debriefed as a group immediately after completion of the exercise and post-activity questionnaires. The debrief period included information about the study along with the opportunity for participants to ask questions regarding the study.

## CHAPTER 3

### RESULTS

The goal of this study was to investigate the effect goal setting method and leadership style exerts on group task performance and satisfaction. Along with the effects these variables have independently on performance and satisfaction, the researcher expected to find that the interactive effects of goal setting method and leadership style would be additive, such that a directive leadership style combined with participative goal setting would produce superior task performance and heightened task satisfaction. Data analysis for this study was completed using the Windows version of the Statistical Package for the Social Sciences (SPSS) version 14.

#### *Leadership Style Manipulation Check*

The leadership style manipulation check was included to provide a measure of confidence that the leadership styles exhibited by the group leaders were consistent with the actual behaviors and characteristics associated with directive and participative leadership styles. The manipulation was tested by using an independent samples *t* test for the differences in group ratings of their leaders on the Leadership Style Questionnaire (see Appendix C). Despite the fact that the mean leadership rating for groups with participative leaders was lower on the scale (indicating a more participative style) and the mean leadership rating score for groups with directive leaders was higher on the scale (indicating a more directive style), the *t* test was not significant ( $p = .14$ ) and therefore the leadership style manipulation was not successful (means and standard deviations are shown in Table 2). This result suggests that the participants did not perceive the group leader styles to be significantly more directive or participative in nature, respectfully.

Table 2

*Variable Means and Standard Deviations for Leadership Style Manipulation Check*

All Participants ( <i>n</i> = 56)			
	<i>n</i>	<i>M</i>	<i>SD</i>
Directive Leaders	28	3.71	1.86
Participative Leaders	28	2.89	1.73

*Note.* No significant differences using independent sample *t* test between the two subsamples were found for these variables.

### *Hypotheses*

*Hypothesis 1(a).* Hypothesis 1(a) stated that groups with assigned and participatively set goals would achieve higher levels of overall performance (number of correct solutions out of three) than groups with do-your-best goals. This hypothesis was tested as part of a two-way analysis of variance (ANOVA) with overall performance scores from each group as the dependent variable and goal setting condition as the independent variable. This hypothesis did not receive support. As illustrated in Table 3, there was a significant main effect for the differences in overall performance scores in terms of goal setting condition  $F(2, 50) = 57.46, p < .001$ . The Tukey honestly significant difference (HSD) post hoc analysis revealed that groups in the assigned and do-your-best goal setting conditions did not differ from each other but performed significantly better than groups in the participative goal setting condition (see Table 4 for means and standard deviations).

*Hypothesis 1(b).* Hypothesis 1(b) stated that groups with assigned and participatively set goals would achieve higher levels of performance in term of asking fewer questions to reach the solution than groups with do-your-best goals. This hypothesis was tested as part of a two-way ANOVA with mean number of questions/guesses asked from each group as the dependent variable and goal setting condition as the independent variable. The results did not support this hypothesis. A significant main effect was found for the differences in mean number of questions asked by group  $F(2, 50) = 10.57, p < .001$  (see Table 5). However, a Tukey post hoc procedure revealed that it was the do-your-best goal setting condition that asked significantly fewer questions to arrive at the correct problem solution, compared to both the assigned and

Table 3

*Summary of Two-Way (Goal Setting Method and Leadership Style) Analysis of Variance on Overall Task Performance Score (Total Number of Correct Solutions)*

Source	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>
Goal Setting Method (GSM)	16.09	2	8.04	57.46*
Leadership Style (LS)	0.39	1	0.39	0.10
GSM x LS	5.42	2	2.71	19.37*
Error	7.00	50	0.14	

\* $p < .001$

Table 4

*Summary of Means and Standard Deviations of Overall Performance Scores (Total Number of Correct Solutions) by Main Effects of Goal Setting Method and Leadership Style*

Overall Performance Score	<i>n</i>	<i>M</i>	<i>SD</i>
<b>GSM</b>			
Do-Your-Best	20	2.75 <sub>a</sub>	0.44
Participative	18	1.56 <sub>b</sub>	0.51
Assigned	18	2.50 <sub>a</sub>	0.51
<b>LS</b>			
Participative	28	2.32	0.48
Directive	28	2.25	0.89

GSM = Goal Setting Method

LS = Leadership Style

*Note.* Means for GSM conditions that do not share letter subscripts differ at  $p < .05$  in the Tukey honestly significant difference comparison.

Table 5

*Summary of Two-Way (Goal Setting Method and Leadership Style) Analysis of Variance on Performance Score (Mean Number of Questions per Trial)*

Source	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>
Goal Setting Method (GSM)	71.37	2	35.69	10.57*
Leadership Style (LS)	227.74	1	227.74	67.42*
GSM x LS	507.24	2	253.62	75.09*
Error	168.89	50	3.38	

\* $p < .001$

participative goal setting conditions (see Table 6 for means and standard deviations).

*Hypothesis 1(c).* Hypothesis 1(c) stated that groups with assigned and participatively set goals would arrive at the correct problem solution in less time than groups with do-your-best goals. This hypothesis was tested as part of a two-way ANOVA with mean amount of time per trial (in seconds) for each group as the dependent variable and goal setting condition as the independent variable. This hypothesis did not receive support. A significant main effect was found for the differences in mean time to identify the correct solution  $F(2, 50) = 12.14, p < .001$  (see Table 7). Similar to Hypothesis 1(a), the Tukey post hoc analysis showed that the assigned and do-your-best goal setting conditions did not differ from each other, but they did arrive at the correct problem solutions in significantly less time than groups in the participative goal setting condition (see Table 8 for means and standard deviations). The results of the analysis for Hypothesis 1(a), 1(b), and 1(c) revealed that groups in the do-your-best goal setting condition performed the best overall and that groups in the participative goal setting condition performed the worst overall. This result suggests that do-your-best goals were effective in promoting higher task performance in this study.

*Hypothesis 2.* Hypothesis 2 stated that groups in the participatively set and do-your-best goal conditions would have higher levels of task satisfaction than groups in the assigned condition. This hypothesis was tested as part of a three-way ANOVA with the total group task satisfaction score for each group as the dependent variable and goal setting condition as the independent variable. An omnibus  $F$  test revealed no significant difference in total group task satisfaction scores in terms of the goal setting condition they were exposed to  $F(2, 44) = 1.25, ns$ . Therefore, Hypothesis 2 was not supported



Table 6

*Summary of Means and Standard Deviations of Performance Scores (Mean Number of Questions per Trial) by Main Effects of Goal Setting Method and Leadership Style*

Questions Performance Score	<i>n</i>	<i>M</i>	<i>SD</i>
GSM			
Do-Your-Best	20	21.33 <sub>a</sub>	2.41
Participative	18	23.61 <sub>b</sub>	5.00
Assigned	18	22.94 <sub>b</sub>	4.43
LS			
Participative	28	20.76 <sub>1</sub>	2.98
Directive	28	24.40 <sub>2</sub>	4.28

GSM = Goal Setting Method

LS = Leadership Style

*Note.* Means for GSM conditions that do not share letter subscripts differ at  $p < .05$  in the Tukey honestly significant difference (HSD) comparison. Similarly, means for the LS conditions that do not share number subscripts differ at  $p < .05$  in the Tukey HSD comparison.

Table 7

*Summary of Two-Way (Goal Setting Method and Leadership Style) Analysis of Variance on Performance Score (Mean Amount of Time per Trial)*

Source	SS	df	MS	F
Leadership Style (LS)	10683.76	1	10683.76	9.04*
Goal Setting Method (GSM)	28702.38	2	14351.19	12.14**
GSM x LS	68849.23	2	34424.61	29.12**
Error	59103.89	50	1182.08	

\* $p < .01$

\*\* $p < .001$

Table 8

*Summary of Means and Standard Deviations of Performance Scores (Mean Amount of Time per Trial in Seconds) by Main Effects of Goal Setting Method and Leadership Style*

Time Performance Score	<i>n</i>	<i>M</i>	<i>SD</i>
GSM			
Do-Your-Best	20	169.67 <sub>a</sub>	37.98
Participative	18	214.17 <sub>b</sub>	47.64
Assigned	18	173.31 <sub>a</sub>	64.13
LS			
Participative	28	174.75 <sub>1</sub>	44.12
Directive	28	195.54 <sub>2</sub>	60.78

GSM = Goal Setting Method

LS = Leadership Style

*Note.* Means for GSM conditions that do not share letter subscripts differ at  $p < .05$  in the Tukey honestly significant difference (HSD) comparison. Similarly, means for the LS conditions that do not share number subscripts differ at  $p < .05$  in the Tukey HSD comparison.

(see Table 9 for ANOVA summary). This result suggests that the manner in which goals are set for a group does not significantly influence the level of task satisfaction for that group.

*Hypothesis 3(a).* Hypothesis 3(a) stated that groups with directive leaders would achieve higher levels of overall performance (number of correct solutions out of three) than groups with participative leaders. This hypothesis was tested as part of a two-way ANOVA with the overall performance scores for each group as the dependent variable and leadership style condition as the independent variable. No support for this hypothesis was found. An omnibus  $F$  test showed no significant difference between the overall group performance scores in terms of leadership style,  $F(1, 50) = 2.75$  (see Table 3). This result suggests that neither leadership style was superior at producing higher overall performance scores.

*Hypothesis 3(b).* Hypothesis 3(b) stated that groups with participative leaders would arrive at the correct problem solution by asking fewer questions and guesses than groups with directive leaders. This hypothesis was tested as part of a two-way ANOVA with mean number of questions/guesses asked for each group as the dependent variable and leadership style condition as the independent variable. An omnibus  $F$  test revealed that groups with participative leaders asked significantly fewer questions and guesses before arriving at the correct problem solution ( $M = 20.76, SD = 2.98$ ) than groups led by directive leaders ( $M = 24.40, SD = 4.28$ )  $F(1, 50) = 67.42, p < .001$ , thereby providing support for Hypothesis 3(b) (see Table 5 for ANOVA summary). This result suggests that groups led by participative leaders perform better than groups led by directive leaders in this aspect of performance.

Table 9

*Summary of Three-Way (Goal Setting Method, Leadership Style, and Reward) Analysis of Variance on Total Group Task Satisfaction*

Source	SS	df	MS	F
Goal Setting Method (GSM)	29.68	2	14.84	1.25
Leadership Style (LS)	117.79	1	117.79	9.89*
Reward	931.02	1	931.02	78.16**
GSM x LS	44.27	2	22.14	1.86
Error	524.10	44	11.91	

\* $p < .01$

\*\* $p < .001$

*Hypothesis 3(c).* Hypothesis 3(c) stated that groups with participative leaders would arrive at the correct problem solutions in less time than groups with directive leaders. This hypothesis was tested as part of a two-way ANOVA with mean amount of time per trial (in seconds) for each group as the dependent variable and leadership style condition as the independent variable. This hypothesis was supported. As evidenced in Table 7, the omnibus  $F$  test showed that groups led by participative leaders required significantly less time to reach the correct problem solution ( $M = 174.75, SD = 44.12$ ) than groups led by directive leaders ( $M = 195.54, SD = 60.78$ ),  $F(1, 50) = 9.04, p < .01$ . Similar to the result of Hypothesis 3(b), this outcome suggests that groups led by participative leaders perform better in aspects of performance related to time.

*Hypothesis 4.* Hypothesis 4 stated that groups with participative leaders would have higher levels of task satisfaction than groups with directive leaders. This hypothesis was tested as part of a three-way ANOVA with the total group task satisfaction score for each group as the dependent variable and leadership style condition as the independent variable. Hypothesis 4 was supported. Groups led by participative leaders reported higher levels of group task satisfaction than groups led by directive leaders,  $F(1, 44) = 9.89, p < .01$  (see Table 9 for ANOVA summary). This result indicates that leadership style does influence the level of overall task satisfaction in groups.

*Hypothesis 5(a).* Hypothesis 5(a) stated that leadership style will have a more significant effect on overall group performance (number of correct solutions out of three) than would goal setting method. This hypothesis was tested by conducting a two-way ANOVA with the overall performance score for each group as the dependent variable and leadership style and goal setting conditions as the independent variables. This hypothesis

did not receive support. As illustrated in Table 3, goal setting method had a significant effect on overall group performance,  $F(2, 50) = 57.46, p < .001$ , whereas leadership style did not,  $F(1, 50) = 2.75, ns$ . This result suggests that goal setting method ( $\eta^2 = .70$ ) has a more significant effect on overall group performance than does leadership style ( $\eta^2 = .05$ ).

*Hypothesis 5(b)*. Hypothesis 5(b) stated that leadership style would have a more significant effect on the number of questions and guesses required by each group to reach the problem solution than would goal setting method. This hypothesis was tested by conducting a two-way ANOVA with mean number of questions/guesses asked for each group as the dependent variable and leadership style and goal setting conditions as the independent variables. Support for this hypothesis was achieved. Both goal setting method and leadership style significantly impacted group performance in terms of the number of questions required to reach the problem solution (see Table 5), but leadership style,  $F(1, 50) = 67.42, p < .001, \eta^2 = .57$  showed a more significant effect than goal setting method,  $F(2, 50) = 10.57, p < .001, \eta^2 = .30$ . These results suggest that leadership style plays a more significant role in this aspect of group performance than does goal setting method.

*Hypothesis 5(c)*. Hypothesis 5(c) stated that leadership style would have a more significant effect on the time required for groups to arrive at the correct problem solutions than would goal setting method. This hypothesis was tested by conducting a two-way ANOVA with mean amount of time per trial (in seconds) for each group as the dependent variable and leadership style and goal setting conditions as the independent variables. Support for Hypothesis 5(c) was not attained. As with Hypothesis 5(b), both goal setting

method and leadership style demonstrated a significant effect on the mean amount of time groups required to arrive at problem solutions (see Table 7). However, it was goal setting method that produced the greater effect,  $F(2, 50) = 12.14, p < .001, \eta^2 = .33$ , over leadership style,  $F(1, 50) = 9.04, p < .01, \eta^2 = .15$ . This result, when combined with the result of Hypothesis 5(a), suggests that goal setting method trumps leadership style in regard to the effect it has on group task performance.

*Hypothesis 6.* Hypothesis 6 stated that goal setting method would have a more significant effect on group task satisfaction than would leadership style. This hypothesis was tested by conducting a two-way ANOVA with the total group task satisfaction score for each group as the dependent variable and leadership style and goal setting conditions as the independent variables. As previously reported (see Table 9), leadership style showed to have a significant effect in terms of its influence on overall group task satisfaction and goal setting method had no significant effect,  $F(2, 44) = 1.25, ns$ . Therefore, this hypothesis did not receive support.

*Hypothesis 7(a) and 7(b).* Hypothesis 7(a) and 7(b) stated that the interactive effects of goals setting method and leadership style would be additive. Groups that had a directive leader and used a participative goal setting method would have the highest overall task performance (7a) and group task satisfaction (7b). These hypotheses were tested by conducting two analyses: for Hypothesis 7(a), a two-way ANOVA using the overall performance score for each group as the dependent variable and leadership style and goal setting conditions as the independent variables (see Table 3), and for Hypothesis 7(b), a three-way ANOVA using the total group task satisfaction score for each group as the dependent variable and leadership style, goal setting condition, and reward condition



as the independent variables (see Table 9). In terms of overall task performance, an omnibus  $F$  test revealed a significant interactive effect with leadership style and goal setting method,  $F(2, 50) = 19.37, p < .001$ . However, the Tukey HSD analysis revealed that the superior combinations included a directive leadership style combined with either assigned or do-your-best goals setting, rather than the participative goal setting condition. When group task satisfaction is examined, an omnibus  $F$  test revealed no significant interactive effects of leadership style and goal setting method on group task satisfaction,  $F(2, 44) = 1.86, ns$ . Therefore, Hypotheses 7(a) and 7 (b) were not supported. Still, this result does suggest that while directive leadership alone did not produce a significant effect, it may be more effective at producing higher overall task performance when paired with certain goal setting conditions. This idea will be explored further in the discussion section.

#### *Exploratory Analysis*

*The effect of performance reward on group task satisfaction.* Exploratory analyses were carried out to examine additional research questions of interest. The first investigated whether the performance reward component of the study influenced the reported task satisfaction for all groups. This question was tested as part of a three-way ANOVA with group task satisfaction as the dependent variable and reward/no reward as the independent variable. As illustrated in Table 9, an omnibus  $F$  test revealed a significant difference in task satisfaction scores between groups receiving the reward versus those that did not,  $F(1, 44) = 78.16, p < .001$ . Groups receiving the performance reward reported significantly higher task satisfaction. This result suggests that the

awarding or denial of a performance reward can significantly influence the level of task satisfaction in a group.

*The effect of sample demographics on performance.* The results of the analysis for Hypothesis 1(a), 1(b), and 1(c) revealed that groups in the do-your-best goal setting condition performed the best overall, compared to the groups in the assigned or participative condition. This result was contrary to the existing research that consistently showed assigned and participative goal setting conditions outperform do-your-best conditions. Therefore, the researcher examined whether any of the participant sample demographics (e.g., age, year in school, or years of work experience) were significantly different for the groups in the do-your best condition. This question was tested by conducting a one-way ANOVA for each demographic measure using goal setting condition as the independent variable. None of the analyses yielded significant results. However, the years of work experience for the do-your-best goal setting condition approached significance,  $F(2, 53) = 2.67, p = .08$  (means and standard deviations are displayed in Table 10).

Table 10

*Variable Means and Standard Deviations for Work Experience in Years*

All Participants ( <i>n</i> = 56)			
	<i>n</i>	<i>M</i>	<i>SD</i>
Do-Your-Best GSM	20	4.55	2.46
Participative GSM	18	3.64	2.67
Assigned GSM	18	2.83	1.58

GSM = Goal Setting Method

## CHAPTER 4

### DISCUSSION

The purpose of this study was to investigate the effects goal setting method and leadership style have on group task performance and satisfaction. Past research has provided strong support for the critical role goal setting plays in elevating performance (Hinsz, 1995; Locke & Latham, 1990, 2002; Whitney, 1994) and how specific leadership styles (including no leadership at all) can interact with that process to reveal certain combinations of those variables can be more effective at improving group performance and task satisfaction (Sagie, 1996). This study extended that research in an attempt to identify a superior leadership style/goal setting method combination that could be leveraged to help organizations and the leaders within them realize the highest possible levels of performance and satisfaction in their work groups. Groups exposed to a directive leader and participative goal setting would achieve the highest overall performance and report the highest task satisfaction, but this did not occur. The implications for these results are discussed next.

#### *Goal Setting Method and Performance*

Groups exposed to assigned and participative goal setting conditions would outperform groups that were simply told to do-your-best in each area of task performance that was measured. Surprisingly, groups in the do-your-best goal setting condition performed the best overall, scoring significantly higher than groups in the participative goal condition in terms of overall correct problem solutions, the number of questions and guesses required per trial, and the amount of time taken to reach the problem solutions. Moreover, do-your-best groups performed better than groups in the assigned condition in

terms of questions and guesses, and they performed equally as well as assigned groups when overall performance and time required to identify the problem solution were examined. This result flies directly in the face of the majority of prior research that has consistently supported the superior effect assigned and participative set goals have over do-best conditions (Erez et al., 1990; Harkins & Lowe, 2000; Latham et al., 1982; Locke & Latham, 1984, 1990; Whitney, 1994). This contrary finding may be a function of mediating factors.

Prior research has identified that typical goal setting effects can be mediated by several factors. For instance, Weiss, Suckow, and Rakestraw (1999) found that a group's self-esteem or expectations of being able to achieve high performance can impact their actual performance. Additionally, Silver and Bufanio (1996) reported that the valence or attractiveness of the desired performance level can influence effort and subsequent performance levels. This factor takes on added significance given that a monetary performance reward was offered to participants. The reward component may significantly raise the attractiveness of achieving high performance and inflated the group's expectations of reaching a high performance level, thereby interfering with or countering the effects that the goal setting method had.

An additional factor that was unaccounted for in the measurements was the informal feedback that each group received between problem trials. The nature of the design allowed each team the opportunity to watch the group they were partnered with as they alternated between trials. This process provided a feedback mechanism that told each group how they were doing in comparison to their partner group. The promise of a reward may have made that available feedback even more salient and therefore offset the

effect of the goal setting process. This mediating effect would be consistent with prior research that found when groups receive negative feedback (in this case, knowing they needed to perform better than their partner group to obtain the reward) they set higher goals and achieved higher performance (Mesch, Farh, & Podsakoff, 1994). Therefore, the mediating effects of the performance reward and feedback may have countered or offset the typical goal setting effect that was expected.

#### *Goal Setting Method and Task Satisfaction*

There were no significant differences in task satisfaction for groups in any of the goal setting conditions. This result was interesting given that past research has shown that participation in the goal setting process leads to increased feelings of involvement and heightened task satisfaction (Oostram & Rabbie, 1995; Pearson, 1987) and that task satisfaction tends to correspond to the likelihood of goal achievement (Hinsz, 1995), meaning satisfaction will be higher if goals are likely to be achieved (such as self-set or do-your-best). This prior research utilized the traditional approach of aggregating the individual satisfaction ratings of group members' attitudes toward the task. The present study utilized the approach suggested by Mason and Griffin (2003) in which group members were asked to rate how they felt the group would rate their satisfaction, rather than just their own attitudes, in order to capture a more accurate measurement of the group task satisfaction construct. By asking participants to make assumptions and ratings about the attitudes of others, this approach may not have captured how each group member actually felt about the goal setting process. In the end, the findings in this study were consistent with Dosset, Latham, and Mitchell (1979) and Latham and Marshall

(1982) which found no significant differences between any of the three goal setting conditions and task satisfaction.

### *Leadership Style and Performance*

Leadership style did emerge as a factor that influenced performance in different ways. It was expected that groups with directive leaders would achieve the best overall performance (correct problem solutions) and groups led by participative leaders would perform better in terms of questions and guesses asked and time taken to reach the correct problem solution. In terms of overall task performance, no significant differences between the two styles were uncovered. These results are consistent with Sagie's (1996) findings that directive and participative leadership did not differ in its effect on overall performance. While that study examined leadership styles that exhibited high and low levels of directiveness along with a no leader condition and found the two former to be superior to the latter, the present study attempted to drill down deeper and uncover differences between the directive and participative styles. Unfortunately, no differences were found in terms of overall performance.

When the focus turns to performance in terms of the number of questions and guesses required to reach the problem solution, groups with participative leaders performed significantly better than groups led by directive leaders. This result was expected and is consistent with the "loose-tight" framework proposed by Sagie (1997) in which group member involvement in decision making is expected to improve performance. The participative approach exhibited by the group leader fostered more open communication among members which allowed them to pose and discuss questioning strategies and guesses before actually presenting them to the researcher. In

addition, the very nature of that process combined with the promise of a performance reward resulted in teamwork that was strengthened by the fact that groups were allowed to observe their partner groups and adjust their number of questions and guesses based on the number their partner group required.

Finally, groups led by participative leaders performed significantly better in terms of the amount of time required to reach the problem solution than groups led by a more directive leader. The rationale for this result is consistent with that for group performance in terms of questions and guesses because it boils down to a measure of efficiency. Groups that are allowed to interact and communicate freely have the ability to openly discuss ideas and strategies. This freedom ultimately eliminates the time wasted by a leader that must ask for, receive, and process information and ideas gathered from group members one at a time. It could be argued that a participative leader may lose control of the group's communication processes and therefore waste time on distractions and off-shoot topics; however, that effect was not observed in this study. Overall, leadership style had a more significant effect on performance measures related to efficiency than those related to overall effectiveness.

#### *Leadership Style and Task Satisfaction*

A participative leadership style was expected to result in higher ratings of group task satisfaction over groups led by a directive leader. Indeed, the findings in this study supported the notion that a parallel exists between the satisfaction associated with participative goal setting (Oostram & Rabbie, 1995; Pearson, 1987) and that found with participative leadership. Groups exposed to a participative leader, who encourages open communication and teamwork, reported significantly higher levels of group task



satisfaction than those led by a leader who directed and controlled all interactions and communications. This result is not surprising given that there was no significant effect of leadership style on overall performance. Normally, groups in the leadership condition that achieved the highest performance would report feeling the highest level of satisfaction associated with the task (Locke & Latham, 1990). But in this case, neither leadership condition performed significantly better, leaving the groups to base their task satisfaction on their experience with the leader and group during the activity. This argument is strengthened when one considers the use of the new group level satisfaction construct identified by Mason and Griffin (2003) to measure group task satisfaction. This method capitalizes on the perceptions created through intra-group communication, which of course is more prevalent in groups led by participative leaders. Therefore, participative leadership seems to produce higher levels of group task satisfaction over a more directive leadership style.

#### *Leadership Style vs. Goal Setting Method on Performance*

Consistent with Sagie (1996), leadership style was expected to have a more significant effect on all aspects of group performance (correct problem solutions, number of questions and guesses, and time required to reach the problem solution) than goal setting method. As it turned out, leadership style was superior only in terms of the number of questions and guesses asked by the groups. In this case, both leadership style and goal setting method had a significant influence, but the effect was greater for leadership style. When examining the other two aspects of performance (correct solutions and time), goal setting method showed the greater influence. This result can likely be explained by the fact that the leadership manipulation was not successful, thereby

minimizing the effect it could have on the task performance of the group. Further, the goal setting methods were straightforward and were not subject to the subjective interpretation of the participants. In fact, the goal setting methods themselves may have substituted for the lack of significant leader effects to influence performance, consistent with the idea posed by Locke and Latham (1990) that the goal setting process is actually one of the core components of the leadership construct. Thus, a determination cannot be made about which variable has the greatest influence on task performance based on the results of this study.

#### *Leadership Style vs. Goal Setting Method on Task Satisfaction*

Goal setting method would have a more significant effect on group task satisfaction than leadership style. This result would have been consistent with Sagie's (1996) result that goal setting method has a stronger influence on overall satisfaction than leadership style. However, this study found that leadership was the variable that significantly influenced task satisfaction instead of goal setting method. This result is quite surprising given that the leadership style manipulation was not deemed successful. The differences in the characteristics and behaviors exhibited by the group leaders, while not significant, may have been sufficient for participants to perceive a difference and for that difference to effect their satisfaction with the task. An additional explanation for this result could be the use of the group-level construct of group task satisfaction proposed by Mason and Griffin (2003) rather than the traditional aggregation of individual ratings used in most previous studies. Given that this construct concentrates on the individual perceptions of the group's shared attitudes instead of just their own, it may be more sensitive to leadership effects and therefore was more easily influenced than traditional

measures of task satisfaction. This result definitely calls for further research to determine which variable has the most significant effect on task satisfaction.

*Interactive Effects of Goal Setting Method and Leadership Style on Task Performance and Satisfaction*

The interactive effects of goal setting method and leadership style were expected to be additive. Similar to Sagie (1996), groups experiencing the combination of directive leadership and participative goal setting would have the highest overall task performance (Kahai et al., 2004; Peterson, 1997) and task satisfaction (Cassar, 1999). That hypothesis was only partially supported in this study by the finding that directive leadership indeed produced higher overall group performance but only when paired with assigned or do-your-best goal setting conditions, rather than the participative condition. This result is understandable given the outcomes of previous Hypothesis in that leadership alone had no significant effect on overall performance and that do-your-best and assigned goals performed better than participative conditions on the majority of performance measures. The influence of the goal setting effect was significant enough to overcome the inadequacy of the main leadership effect and propel the combined interactive effect into significance. This finding can likely be explained by the effect described by Locke and Latham (1990, 2002) where the goal commitment can be increased by incentives and competition, both present in this study. This commitment to the goal is important because it has been shown to have a strong positive influence on performance (Klein, Wesson, Hollenbeck, & Alge, 1999).

Support for the interactive effects of directive leadership and participative goal setting on group task satisfaction was not achieved. In fact, no leadership style and goal

setting method combination proved superior to any other. Again, this result is reasonable due to the non-significant effect that goal setting method had on the task satisfaction reported by groups. Moreover, the present study introduced the inclusion of a performance reward for groups achieving the highest levels of performance. This variable significantly influences group satisfaction and was not present in the study conducted by Sagie (1996). The participants possibly viewed the reward/no reward outcome as the basis for their attitudinal judgments and therefore were not influenced as heavily by leadership style or goal setting method. Evidence of this effect is supported by the mediation model proposed by Locke (2001) wherein money incentives were found to mediate the typical effects of other motivating factors such as goals. The findings in this study provide partial support for the “loose-tight” leadership style framework in the sense that directive leadership behaviors that guide and control group communication processes are essential to producing higher overall group performance (Larson, Foster-Fishman, & Franz, 1998), especially when combined with the practice of goal setting (Sagie, 1997).

#### *Performance Reward and Task Satisfaction*

A performance reward was included in the design of the present study to serve as a motivating factor for participants who otherwise may have exerted the minimal level of effort required to receive credit for their participation in the study. In the end, it appears that the presence of this reward factor had interesting implications for group task satisfaction and yielded some of the most highly significant findings in the study. First, participants who received the reward reported significantly higher levels of group task satisfaction over groups that did not receive the reward. This suggests that the reward was valued by participants and played a major role in their subjective evaluations of the

group's satisfaction as a whole. This finding supports the previous research conducted by Eisenberger, Rhoades and Cameron (1999) where performance-contingent rewards improved the expression of task satisfaction and task interest in college students. This effect is also found in the field where a meta-analysis revealed that rewards are associated with perceived organizational support which in turn results in favorable employee outcomes such as job satisfaction (Rhoades & Eisenberger, 2002). Secondly, the significant effect realized by the reward factor may have served as an unintentional mediating factor that disrupted or even countered the typical effects of leadership style and goal setting method on group task satisfaction. This result is consistent with the model proposed by Locke (2001) which asserts that money incentives can affect self-efficacy, personal goals, goal commitment, and performance. It is through the impact on these variables that a monetary reward could mediate the effects of other motivators such as leadership style or goal setting method.

#### *Limitations and Future Research*

Despite some interesting findings, there were several limitations to the present study. The first and likely most significant is the issue of using a sample consisting entirely of undergraduate students. The research question focused on constructs and dynamics that are most often observed and most closely linked to real world work situations in the field. Student participants may not have had the experience and maturity to approach and complete the activity in the same manner that an incumbent employee might have and their reaction to the exhibited leadership styles may have been different from those of a more experienced worker (Kahai et al., 1997). Therefore, the use of a

student sample makes the generalizability of the results debatable (Mason & Griffin, 2003). Future research should test these hypotheses on a field sample.

Another limitation of this study involves the inherent difficulty of artificially replicating and imitating the leadership style dispositions and group dynamics in a laboratory experiment, as was the case with Sagie (1996). The present study attempted to imitate the actual behaviors and characteristics associated with directive and participative leadership styles outlined in Pearce et al. (2003) and Kahai et al. (2004). However, the manipulation check indicated that the attempt was unsuccessful despite the training and preparation provided to the group leaders. The fact that a *t*-test revealed the leadership style manipulation to be non-significant has widespread implications for the present study. Most importantly, it provides a sound explanation for many of the insignificant or contrary findings reported previously in the present study. The leadership style characteristics and behaviors exhibited by the group leaders simply were not perceived as being significantly different from one another, despite the fact that the group leaders received mean scores that were in the direction of their intended styles. Therefore, participants may not have perceived the leadership style as intended and subsequently did not respond as expected.

This result could also have been a function of the gender of the group leaders in that men are typically characterized by a more directive leadership style (Brewer et al., 1996). This characterization could have prevented some participants from rating the participative leaders accurately. In addition, the individual chosen to fill the role of directive group leader was previously well known to many of the participants. Their prior experience with him may have biased and overpowered their perceptions of him during

the experiment, resulting in rating errors that skewed the results. In hindsight, selecting leaders that are unknown to the participants along with a more thorough training program (including practice sessions) may have contributed to a more successful manipulation of the leadership variable. Additional evidence for the effectiveness of the manipulation beyond the ratings of participants could have been provided by including observations and measurements taken from audio or video tapes from which coders could have evaluated the characteristics and behaviors each leader was trained to exhibit (Larson, Foster-Fishman, & Franz, 1998). Still, it is possible that leadership styles are so complex and difficult to imitate that they are best carried out by individuals that naturally possess an inclination for exhibiting the traits and behaviors. In addition, the task groups were formed randomly and quickly, leaving minimal time for participants to get to know one another and develop the relationships that facilitate typical group dynamics (Cruz, Henningsen, & Smith, 1999; Kahai et al., 1997; Mason & Griffin, 2003). Future researchers should seek to use existing work groups in the field that have intact leaders who possess and exhibit the characteristics of the leadership styles under examination.

Lastly, the inclusion of a performance reward for the highest achieving groups introduced a factor that may have mediated or countered the effects of the independent variables (Locke, 2001). The experimental design created the opportunity for natural competition between teams to exist by allowing partner groups to observe one another as they alternated between problem trials. The addition of the reward component may have elevated the level of competition and exaggerated the effect it had on the attitudes and behaviors of the participants.

This research could not conclusively answer the question of how directive and participative leadership styles interact with goal setting methods to influence group performance and task satisfaction. Given the increasing popularity of work groups in business today (Kahai et al., 2004) and the frequency with which goals and objectives are set as a tool to motivate and direct team efforts (Antoni, 2005), the need certainly exists to identify a leadership approach that helps these groups achieve their goals. Therefore, extensions of this research are needed. Future research should examine how other leadership styles, such as transactional and transformational (Pearce et al., 2004) interact with the goal setting effect to influence group outcomes. In addition, more research questions and variables could provide insight how the leader-follower relationship operates to influence goal attainment. For instance, the effects of personality, work experience, type of industry, size of group, virtual groups, and group diversity could all be investigated to add to the understanding of high performance groups.

### *Conclusions*

The study revealed some interesting and at times contrary findings that may open new avenues of research and deepen the understanding of the complex relationship between how leadership styles interact with goal setting methods to influence group performance and satisfaction outcomes. Participative leadership improves a group's task satisfaction and is most effective at increasing performance measures related to efficiency, rather than overall performance. This finding is consistent with previous studies that have found more participative leadership styles result in higher satisfaction (Cassar, 1999; Oostrum & Rabbie, 1995) and that the incorporation of goal setting with this leadership approach can enhance both affective reactions and performance



(Whittington, Goodwin, & Murray, 2004). In terms of degree of influence, goal setting method has a greater effect on task performance while leadership has a greater influence on group task satisfaction. This result supports previous findings that group goals predict group performance and satisfaction, but that group processes such as those influenced by leadership style can mediate satisfaction outcomes (Antoni, 2005). Finally, the combined effects of leadership style and goal setting method can be additive, with directive leadership proving superior when combined with assigned or do-your-best goal setting. However, the results are inconclusive, and additional research is needed to provide more definitive explanations for how these constructs operate in the field.

The search for effective motivational levers will never end and organizations will continue to seek effective practices that elevate the satisfaction and performance of work groups. An enhanced understanding of how common techniques associated with leadership and goal setting work will undoubtedly move the field closer to that goal. Hopefully, this understanding will promote the use of effective leadership and goal setting practices and contribute to our overall comprehension of the complex process of human motivation, satisfaction, and performance in the workplace.

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Appendix A

Institutional Review Board (IRB) Approval Letter

April 19, 2005

Sean Balke  
1328 S Todd Court  
Wichita, KS 67207

Dear Mr. Balke:

Your application for approval to use human subjects, entitled "Effect of Leadership Style and Goal Setting Method on Group Task Performance and Satisfaction," has been reviewed. I am pleased to inform you that your application was approved and you may begin your research as outlined in your application materials.

On behalf of the Institutional Review Board, I wish you success with your research project. If I can help you in any way, do not hesitate to contact me.

Sincerely,



Dr. Jeffrey Tysinger  
Chair, Institutional Review Board

pf

cc: Brian Schrader

**Appendix B**  
**Informed Consent Document**

## Informed Consent Document

The Department of Psychology/Special Education at Emporia State University supports the practice of protection for humans participating in research and related activities. The following information is provided so that you can decide whether you wish to participate in the present study. You should be aware that even if you agree to participate, you are free to withdraw at any time, and that if you do withdraw from the study, you will not be subjected to reprimand or any other form of reproach.

You are invited to participate in a study investigating the relationship between leadership styles and goal setting on group performance and satisfaction. You will be assigned to a group that will complete a problem solving exercise. Your team's performance will then be measured, and you will be asked to complete a brief survey assessing your satisfaction with the task. Your participation will take approximately one hour.

There will be no risk or discomfort associated with your participation in the study. The information obtained in this study will be identifiable only by group number. Your name will be used only to indicate that you participated in the study and you will receive extra credit for your participation.

Please direct any questions or comments about this study to the experimenter Sean Balke, 1328 S. Todd Court, Wichita, KS 67207, 316-990-1488. If you have further questions, please contact Dr. Brian Schrader, Department of Psychology and Special Education, 321 Visser Hall, 341-5818.

-----  
 "I have read the above statement and have been fully advised of the procedures to be used in this study. I have been given sufficient opportunity to ask any questions I had concerning the procedures and possible risks involved. I understand the potential risks involved and assume them voluntarily. I also understand that I can withdraw from the study at any time without being subjected to reproach."

\_\_\_\_\_  
 Participant Signature

\_\_\_\_\_  
 Date

\_\_\_\_\_  
 Experimenter Signature

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



Appendix C  
Leadership Style Questionnaire

## Leadership Style Questionnaire

Date: \_\_\_\_\_ Group Number: \_\_\_\_\_

Group Leader Name: \_\_\_\_\_

### Instructions

Considering the descriptions of leadership styles provided below, please use the rating scale provided to answer the question regarding your group leader.

### Participative Leadership

- Characterized by open communication, asking for information, asking for opinions, asking for suggestions, encouraging open thinking & self problem solving, allowing participation among group members, and encouraging teamwork

### Directive Leadership

- Characterized by initiating and organizing group activity, defining, in detail, the way work is done, establishing clear channels of communication, giving information, giving their own suggestions, giving their own opinions, assigning tasks to subordinates, coordinating activities of subordinates, making important decisions without consulting subordinates, criticizing poor work, and ensuring that subordinates follow procedures

Please use this rating scale to answer the question below.

1 = Extremely Participative

2 = Very Participative

3 = Somewhat Participative

4 = Neutral

5 = Somewhat Directive

6 = Very Directive

7 = Extremely Directive

1. How would you rate the leadership style exhibited by your group leader?

1      2      3      4      5      6      7

## Appendix D

### Experimenter Data Recording Form

### Experimenter Data Recording Form

Date: _____	Session Number: 1 2 3 4 5 6
Group Number: _____	Group Leader: _____
Experimental Condition: Directive / Participative      Assigned / Participative / Do-Best	

#### Performance Goals for the Group

Total number of questions and guesses per trial: \_\_\_\_\_

Elapsed time to solve problem per trial (5-min max): Minutes \_\_\_\_\_ Seconds \_\_\_\_\_

#### Group Performance Measures

Trial 1:      Questions/Guesses (each check represents 1 question or guess)  
 \_\_\_\_\_ Total \_\_\_\_\_

Time: Minutes \_\_\_\_\_ Seconds \_\_\_\_\_      Correct Solution:    Yes    No

Trial 2:      Questions/Guesses (each check represents 1 question or guess)  
 \_\_\_\_\_ Total \_\_\_\_\_

Time: Minutes \_\_\_\_\_ Seconds \_\_\_\_\_      Correct Solution:    Yes    No

Trial 3:      Questions/Guesses (each check represents 1 question or guess)  
 \_\_\_\_\_ Total \_\_\_\_\_

Time: Minutes \_\_\_\_\_ Seconds \_\_\_\_\_      Correct Solution:    Yes    No

#### Group Performance Summary:

Mean number of questions/guesses: \_\_\_\_\_

Mean elapsed time: Minutes \_\_\_\_\_ Seconds \_\_\_\_\_

Number of correct solutions out of three: \_\_\_\_\_

Appendix E

Group Task Satisfaction Questionnaire

## Group Task Satisfaction Questionnaire

Date: \_\_\_\_\_ Group Number: \_\_\_\_\_

Group Leader Name: \_\_\_\_\_

### Instructions

Please rate each item as you think your group as a whole would rate it, rather than just how you feel about the item. Please use the rating scale provided below for each item.

1 = Extremely Dissatisfied

2 = Very Dissatisfied

3 = Somewhat Dissatisfied

4 = Neutral

5 = Somewhat Satisfied

6 = Very Satisfied

7 = Extremely Satisfied

1. How satisfied was the group with the activity?

1      2      3      4      5      6      7

2. How satisfied was the group with the process used to establish group performance goals or expectations?

1      2      3      4      5      6      7

3. How satisfied was the group with the actual goals or expectations set for the group's performance?

1      2      3      4      5      6      7

4. How satisfied was the group with the overall level of performance it achieved in the activity?

1      2      3      4      5      6      7

5. How satisfied was the group with the leadership style exhibited by the group leader?

1      2      3      4      5      6      7

Please return your completed questionnaire to the experimenter. Thank you.

Appendix F

Demographic Information Form

## Demographic Information Form

Date: \_\_\_\_\_ Group Number: \_\_\_\_\_

Group Leader Name: \_\_\_\_\_

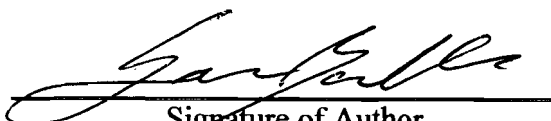
Please provide the information requested below.

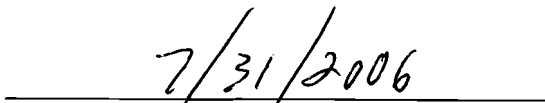
- 1) Gender (circle one): Male          Female
- 2) Age: \_\_\_\_\_
- 3) Year (circle one): Freshmen      Sophomore      Junior      Senior
- 4) Years of actual work experience (including internships, full-time or part-time employment): \_\_\_\_\_



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I, Sean A. Balke, 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 of 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.

  
\_\_\_\_\_  
Signature of Author

  
\_\_\_\_\_  
Date

The Effects of Leadership Style and Goal Setting Method  
On Group Task Performance and Satisfaction

\_\_\_\_\_  
Title of Thesis

  
\_\_\_\_\_  
Signature of Graduate Office Staff Member

*7/31/2006*