

Internal Work Motivation and Intrinsic Job Satisfaction: The Effects of Goal Clarity, Goal Difficulty, Participation in Goal Setting, and Task Complexity

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The research literature on goal setting in organizations provides substantial evidence that several task goal attributes have a positive impact on employee motivation, performance, and attitudes (Latham & Yukl, 1975). Six relatively distinct task goal attributes have been identified: (1) goal clarity or specificity, (2) goal difficulty, (3) participation in goal setting, (4) feedback on task performance, (5) peer competition for goal attainment, and (6) goal acceptance (Steers & Porter, 1974). In a comprehensive review of the goal-setting literature, Latham and Yukl (1975) conclude that there is substantial support for the positive impact of goal clarity, goal difficulty, and feedback on task performance. However, they suggest

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that previous research has not adequately tested the effects of participation in the goal-setting process. Further, they identified several limiting conditions or moderating variables, such as job complexity, individual traits, and instrumentality of rewards, that may moderate the effects of goal setting on employee motivation, performance, and attitudes. The purpose of this study is to examine the potential influence of job complexity on the interaction of three task goal attributes—goal specificity, goal difficulty, and participation in goal setting—in determining the level of employee internal work motivation and intrinsic job satisfaction.

The basic premise of Locke's (1968) theory of goal setting is that an individual's conscious intentions regulate his or her actions; that is, goals determine performance. The partial theory of task motivation proposed by Locke suggests that "the most immediate, direct motivational determinant of task performance is the individual's goal or intention" (Locke, Cartledge, & Knerr, 1970, pp. 135). Much of the support for the positive effect of goal setting on performance and satisfaction is provided by a series of laboratory experiments (Bryan & Locke, 1967; Hamner & Locke, 1967; Hamner & Hartnett, 1974; Ilgen & Hamstra, 1972; Locke, 1967; Locke & Bryan, 1966a, 1966b, 1967; Locke, Bryan, & Kendall, 1968; Matsui, Okada, & Kakuyama, 1982; Terorg, 1976; White, Mitchell, & Bell, 1977). A review of these studies suggests that employees generally perform better and are more highly satisfied when specific challenging goals are established than when general, easy-to-attain goals are set. However, many of the tasks in these experiments were relatively simple, such as adding numbers, routine clerical tasks, and perceptual speed.

Several field studies have found external validity for a portion of goal-setting theory. In their review of the goal-

setting literature, Latham and Yukl (1975) examined 27 published and unpublished reports of field research. They concluded that ten of eleven studies provided support for the effectiveness of setting specific goals and six of seven studies provided evidence supporting the hypothesized positive relationship between goal difficulty and performance. Further, they suggested that while five studies provided some evidence of the superiority of participative goal setting over assigned goal setting, none of these studies provided an adequate test of this relationship due to methodological problems. Participative goal setting was found to be superior only under certain conditions or with certain types of employees.

A review of the goal-setting literature since the Latham and Yukl (1975) review article was published yielded several additional field studies that examined various dimensions of goal-setting theory. Steers (1975) reports the results of a study using 133 female first-line supervisors in a public utility. Steers examined the relationships among five task goal attributes (participation in goal setting, feedback, peer competition, goal difficulty, and goal specificity) and supervisory ratings of subordinate goal effort and overall performance. None of the five task goal attributes was found to be strongly related to effort or performance. Participation in goal setting was significantly related to overall performance ($r = .20, p \leq .05$) but not goal effort. Goal specificity was significantly related to goal effort ($r = .17, p \leq .05$) but not overall performance.

However, when the sample was divided into high and low achievement groups, an interesting relationship was found. Participation in goal setting was significantly related to both effort and performance for low need achievers (.05 and .01, respectively) but not for high need

achievers. Goal specificity and feedback were significantly related to both effort and performance for high need achievers (.05) but not for low need achievers. Steers concludes that high need achievers perform better when they are given clear, specific goals and when they receive feedback on their performance. Allowing low need achievers to participate in setting goals may lead to job involvement and commitment to goal accomplishment. Thus some support is provided for the moderating effects of achievement on the goal-setting process. Becker (1978) and Kim and Hamner (1976) provide evidence that goal setting alone can lead to increased performance levels. However, when feedback is added to the goal-setting process, performance is generally enhanced further.

Several studies have included an examination of the effect of participation in goal setting on performance or motivation. Latham et al. (1976) found that both goal difficulty and goal specificity led to higher levels of performance than did general or easy-to-attain goals. There was no significant difference in performance levels between employees who were allowed to participate in setting goals and those who were assigned goals. However, employee participation in goal setting led to higher goals being set than was the case when the supervisor assigned goals to the employee. Thus participation in goal setting may be important to the extent that it influences goal difficulty.

In a study of sales personnel, Ivancevich (1976) found that participative goal setting was not superior to assigned goal setting, but both types of goal setting were superior to not setting any goals at all. Similar results were provided in a study of skilled technicians employed in an equipment and parts manufacturing firm (Ivancevich, 1977). Participative and assigned goal setting were superior to setting general goals such as "do your best."

However, assigned goal setting was found to be slightly superior to participative goal setting. Somewhat contradictory findings are provided in a study of 133 female first-line supervisors in a large public utility (Steers, 1976). Participation in goal setting, goal difficulty, and goal specificity were all found to be significantly and positively related to both job involvement and job satisfaction. Need strength measures of achievement, autonomy, and affiliation were found to moderate these relationships somewhat. Although they did not include performance or motivation measure, Arvey and Dewhirst (1976) found goal clarity and planning, subordinate freedom, feedback and evaluation, and participation in goal setting to be significantly and positively related to overall job satisfaction ($p \leq .05$). However, they found no support for the moderating effects of three need strength measures (achievement, autonomy, and affiliation) or for two demographic variables (age and education).

Umstot, Bell, and Mitchell (1976) examined the potential interaction effects of job enrichment and goal setting on productivity and job satisfaction. They propose an "integrated model of job design" that suggests that job enrichment may lead to higher job satisfaction, higher work quality, lower turnover, and better attendance; goal difficulty and goal clarity may lead to increased productivity. The results provide support for the job enrichment-satisfaction relation as well as the goal setting-productivity relation. They conclude that job enrichment and goal setting can be combined without creating any adverse impacts.

The conclusions drawn from a review of the more recent goal-setting literature (Locke, Shaw, Saari, & Latham, 1981) are similar to those suggested by Latham and Yukl (1975). Setting clear, specific, and difficult goals may lead to increased effort and better perfor-

mance than generalized goals or no goals at all. The effects of participation in goal setting remain unclear. However, there is some evidence to suggest that participation in goal setting may affect effort and performance indirectly by leading to the establishment of more difficult goals (Latham et al., 1978).

It seems clear that there is a positive relation between task goal attributes and job satisfaction. Most of the studies that have included a measure of job satisfaction have reported positive significant relations between various task goal attributes and job satisfaction (Arbey & Dewhirst, 1976; Ivancevich, 1976, 1977; Kim & Hamner, 1976; Steers, 1976; Umstot et al. 1976). Employees apparently prefer jobs in which they know what is expected of them, the task provides a certain amount of challenge, and they are allowed to participate in setting the goals they are to achieve.

It is also becoming increasingly clear that as Latham and Yukl (1975) suggested, several moderating variables may affect the goal-setting process. Steers (1975, 1976) provided some support for the hypothesis that various need strengths may moderate goal-setting effectiveness. However, Arvey and Dewhirst (1976) found no support for this hypothesis. Clearly, additional research on employee traits as moderators of goal-setting effectiveness is needed.

As Latham and Yukl (1975) point out, one determinant of goal-setting effectiveness may be the degree of task complexity. "Goal setting for simple jobs with only one or two important performance dimensions may be much easier and more effective than goal setting for jobs with many performance dimensions, especially when some of these dimensions cannot be measured quantitatively" (p. 842). The purpose of this research is to examine the potential moderating effect of task complexity on the effectiveness of the goal-setting process. The goal-setting

literature discussed above suggests a number of hypotheses that are examined in the present study.

H₁: Goal difficulty and goal clarity will have a significant, positive effect on both motivation and job satisfaction independent of the degree of task complexity.

H₂: Task complexity and participation in goal setting will interact such that individuals on simple, low-scope jobs will be more highly satisfied and more highly motivated when allowed to participate in setting goals than when goals are assigned.

H₃: Goal difficulty and participation in goal setting will interact such that individuals who report difficult, challenging goals will be more highly satisfied and more highly motivated when allowed to participate in goal setting than will individuals who are assigned goals.

METHOD

Subjects

The subjects in this study were 8938 nonsupervisory employees of a large utility. These employees performed a variety of clerical, technical, and nontechnical tasks. The data were collected as part of an organization-sponsored attitude survey.

Measures

Task complexity. In order to obtain a measure of the degree of task complexity, respondents completed the 15-item Job Diagnostic Survey (JDS; see Hackman & Oldham, 1976). The JDS measures the dimensions of autonomy, feedback, task variety, task identity, and task

significance. Consistent with Abdel-Halim (1981), Hackman and Oldham (1976), and Schuler (1977), low scores on this job complexity measure are descriptive of relatively simple, low scope jobs and high scores are indicative of relative complex, high-scope jobs.

Goal clarity, goal difficulty, and participation. These three dimensions of the goal-setting process were measured in five-point Likert-type scales by means of the following items:

Goal clarity: "To what extent have clear, specific performance goals been established for your job?"

Goal participation: "To what extent do you have a chance to influence the goals that are set, or are they essentially set by the manager?"

Goal difficulty: "How challenging and difficult are the goals and standards that have been set?"

The intercorrelations of these task goal attributes are shown below, with r^2 in parentheses. While these variables are somewhat related, they are still distinct enough (i.e., $r^2 = .13, .14,$ and $.05$) to constitute three relatively autonomous task goal attributes.

	Clarity	Difficulty	Participation
Clarity	1.00	.36 (.13)	.38 (.14)
Difficulty		.00	.22 (.05)

Internal work motivation. Internal work motivation was measured by the following three items from the Job Diagnostic Survey: (1) "My opinion of myself goes up

when I do this job well." (2) "I feel a great sense of personal satisfaction when I do the job well." (3) "I feel bad and unhappy when I discover that I have performed poorly on this job." Scores on these three items were summed, and an average internal work motivation score was computed for each respondent. The internal consistency reliability (coefficient alpha) for this scale was .64.

Job satisfaction. Intrinsic job satisfaction was measured by means of a five-item scale. Respondents were asked to indicate, on a seven-point Likert-type scale, how satisfied they were with the following aspects of their jobs:

"The amount of freedom you have on your job."

"The chances you have to learn new things."

"The chances you have to accomplish something worthwhile."

"The chances you have to do something that makes you feel good about yourself as a person."

"The chances you have to take part in making decisions."

The internal consistency reliability (Cronback's alpha) for this scale was .86.

Analytical Procedure

Following the procedure suggested by Runyon (1973), the task complexity variable was dichotomized by selecting only those individuals who were one standard deviation above or below the mean on the task complexity scale. The mean task complexity score for the entire sample was 79.818. Scores for respondents in the low task complexity category ranged from 6.00 to 63.821. Scores for respondents in the high-task complexity group ranged from 95.815 to 105.00.

The task goal attribute variables were dichotomized by excluding responses at the midpoint of each of these scales. The midpoint on each of the task goal attribute scales clearly represented a moderate level of each attribute (e.g., goal clarity—"some clear goals"; participation in goal setting—"some influence over goals"; and goal difficulty—"moderately challenging and difficult"). The endpoints on these scales clearly represented extremes (e.g., goal clarity—"many clear, specific goals" to "no specific goals").

The data were analyzed using analysis of variance. The dependent variables were internal work motivation and intrinsic job satisfaction. The independent variables were goal clarity, goal difficulty, participation in goal setting, and task complexity.

RESULTS

Table 1 presents the results of the analysis of variance of the independent variables by internal work motivation. Contrary to Hypothesis 1, no significant main effects were observed for either goal clarity or goal difficulty. Only participation in goal setting and task complexity exhibited significant main effects. Consistent with Hypothesis 2, a significant interaction effect was found for participation in goal setting and task complexity. The hypothesized goal difficulty \times participation interaction was not found; however, an unpredicted goal clarity \times task complexity interaction was observed. All means for the significant two-way interactions were examined and are plotted graphically in Figure 1. Scheffe tests (Winer, 1971) were used to determine significant differences in the means of the relevant categories.

TABLE 1

Analysis of Variance-Internal Work Motivation

Source of Variation	DF	Mean Square	F
Main Effects:			
Goal Clarity (A)	1	.233	.310
Goal Difficulty (B)	1	1.546	2.054
Participation (C)	1	12.652	16.815***
Task Complexity (D)	1	198.640	263.999***
Two-Way Interactions:			
A x B	1	.018	.024
A x C	1	.262	.348
A x D	1	3.591	4.773*
B x C	1	.085	.112
B x D	1	2.786	3.702
C x D	1	3.311	4.401*
Three-Way Interactions:			
A x B x C	1	1.734	2.305
A x B x D	1	.052	.070
A x C x D	1	.007	.010
B x C x D	1	.144	.191
Four-Way Interactions:			
A x B x C x D	1	2.523	3.353
Residual	1070	.752	
R ²			.353

* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$.

N = 1086.

The results in Figure 1 show that individuals in simple low-complexity jobs report significantly higher internal work motivation when they experience high rather than low goal clarity (means = 5.48 and 5.01, respectively; $p \leq .01$), and when they experience high rather than low participation in goal setting (means = 5.57 and 4.97, respectively; $p \leq .01$).

Table 2 presents the results of the analysis of variance for intrinsic job satisfaction. Significant main effects were found for goal difficulty, participation in goal setting, and task complexity. Contrary to Hypothesis 1, goal clarity did not exhibit a significant main effect on intrinsic job satisfaction. Consistent with Hypothesis 2, a

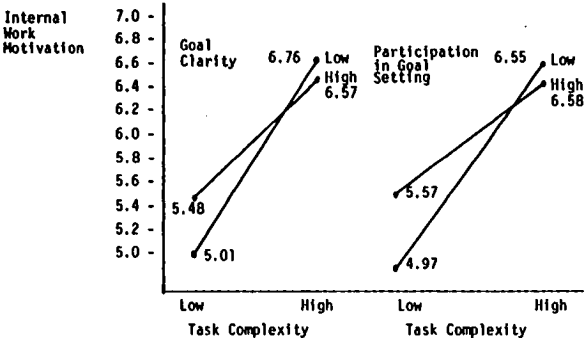


Figure 1: Internal work motivation: significant interactions among task goal attributes and task complexity.

significant participation \times task complexity interaction effect was observed. Unpredicted significant goal clarity \times participation in goal setting and goal difficulty \times task complexity interaction effects were found. The cell means for the significant two-way interactions are plotted in Figure 2. Again, Scheffe tests (Winer, 1971) were used to determine significant differences in the means of the relevant categories.

Figure 2 shows that individuals who are allowed to participate in goal setting report significantly higher intrinsic job satisfaction when they experience high rather than low goal clarity (means = 6.06 and 4.46, respectively; $p \leq .01$). Individuals on simple, low-complexity jobs report significantly higher intrinsic job satisfaction when they experience high rather than low goal difficulty (means = 4.44 and 3.28, respectively; $p \leq .01$), and when they are allowed to participate in setting goals as opposed to being assigned goals by their supervisor (means = 3.89 and 3.18, respectively; $p \leq .01$). In

TABLE 2
Analysis of Variance-Internal Work Motivation

Source of Variation	DF	Mean Square	F
Main Effects:			
Goal Clarity (A)	1	.000	.000
Goal Difficulty (B)	1	52.974	67.472 ^{***}
Participation (C)	1	8.705	11.087 ^{***}
Task Complexity (D)	1	742.948	946.274 ^{***}
Two-Way Interactions:			
A x B	1	1.308	1.666
A x C	1	6.308	8.034 ^{**}
A x D	1	.027	.034
B x C	1	.006	.007
B x D	1	4.228	5.384 [*]
C x D	1	3.627	4.419 [*]
Three-Way Interactions:			
A x B x C	1	.258	.329
A x B x D	1	.458	.583
A x C x D	1	.918	1.170
B x C x D	1	.006	.007
Four-Way Interactions:			
A x B x C x D	1	.000	.001
Residual	1070	.785	
R ²			.712

* $p \leq .01$; ** $p \leq .01$; *** $p \leq .001$.

N = 1086.

addition, individuals on highly complex jobs report significantly higher intrinsic job satisfaction when they have difficult, challenging goals rather than easy-to-attain goals (means = 6.52 and 5.95, respectively; $p \leq .01$).

DISCUSSION

The most important finding of this study is the interaction between task complexity and various task goal attributes. The results indicate that goal clarity and participation in goal setting may lead to higher levels of internal work motivation for individuals on simple, low-

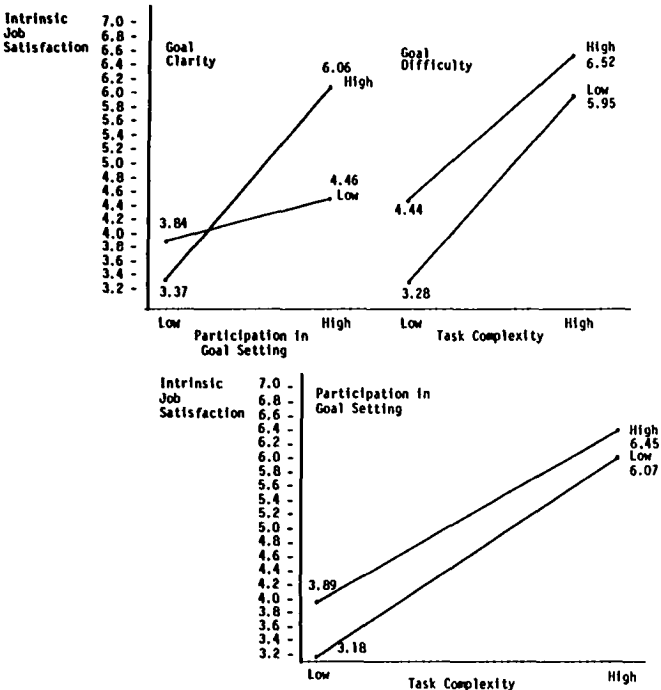


Figure 2: Intrinsic job satisfaction: significant interactions among task goal attributes and task complexity.

complexity jobs. In addition, difficult, challenging goals and participation in goal setting may lead to higher levels of intrinsic job satisfaction for these individuals.

The results also indicate that individuals who participate in goal setting and perceive a higher degree of goal clarity report higher levels of intrinsic job satisfaction independent of the degree of task complexity. It may be

that participation in goal setting leads to increased goal clarity. That is, participation in goal setting may result in increased interaction and communication with one's superior, which leads to a clearer understanding of what the individual employee is to achieve.

Surprisingly, only goal difficulty had a significant positive affect on the intrinsic job satisfaction of individuals on highly complex jobs. This suggests that goal-setting theory may have more of an impact for individuals on simple, low-scope jobs than for individuals on high-complexity jobs.

The results did not support Hypothesis 1. Goal clarity had a significant impact on internal work motivation but not intrinsic job satisfaction only for individuals on low-complexity jobs. However, goal difficulty did have a significant impact on intrinsic job satisfaction but not internal work motivation for both categories of employees.

Hypothesis 2 was supported. Individuals on simple, low-complexity jobs reported higher internal work motivation and higher intrinsic job satisfaction when they participated in the goal-setting process.

The findings did not support Hypothesis 3. Goal difficulty had a significant, positive impact on the intrinsic job satisfaction, but not on internal work motivation, for both categories of employees, independent of the degree of participation in goal setting.

In summary, this study has provided support for the moderating effects of task complexity in the goal-setting process. Goal difficulty appears to have a positive effect on intrinsic job satisfaction regardless of the degree of task complexity. However, participation in goal setting and goal clarity appears to have a positive impact on internal work motivation only for individuals in low-complexity jobs. Additional research is needed to determine which task goal attributes are most effective for

high- and low-scope jobs, and if in some jobs goal setting is ineffective or even dysfunctional. However, even when goal setting is appropriate for a certain type of job, it still may not be effective for every employee performing that type of job. Steers (1975, 1976) provided evidence of the moderating effects of various personal attributes; thus more comprehensive studies, including an examination of both task complexity and individual traits, are needed in order to develop a model of goal-setting effectiveness.

The results of this study have strong implications for traditional MBO programs that tend to involve only middle- and upper-level management and emphasize participation in the goal-setting process. Middle- and upper-level management positions are more likely to involve jobs characterized by high task complexity. Participation in goal setting is likely to have little or no impact on the internal work motivation and intrinsic job satisfaction of individuals in these positions. The level of participation in the goal-setting process advocated by many MBO programs is costly and may not be justified. The presence of difficult, challenging goals and goal clarity increases job satisfaction for individuals in positions of high task complexity. To the extent that participation in goal setting leads to more difficult goals and greater clarity, as some studies suggest, participation may be beneficial. It may be more cost-effective to train managers to develop and communicate clear, challenging goals for subordinates and to deemphasize the participation process.

Individuals in lower-level positions that tend to be characterized by low task complexity are more likely to benefit the most from traditional MBO programs, but they are also more likely to be excluded from participation. Individuals in these positions are more likely to realize an increase in internal work motivation as well as intrinsic job satisfaction by participating in the goal-

setting process. Furthermore, this participation is likely to provide greater goal clarity, which is positively related to internal work motivation and intrinsic job satisfaction.

Traditional MBO programs that focus on middle and upper-level management and ignores lower levels of the organization are likely to exclude those individuals who will benefit the most from the MBO process. Furthermore, traditional MBO programs having a strong emphasis on participation may not be ideally suited for higher-level positions that are characterized as having high task complexity.

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