

IMPROVING THE PERFORMANCE OF TECHNOLOGISTS AND USERS ON INTERDISCIPLINARY TEAMS: AN ANALYSIS OF INFORMATION SYSTEMS PROJECT TEAMS

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As the technological dimension of society becomes more complex (Huber, 1984), the role played by technologists will become more important. And as this occurs, the question of motivating these individuals also becomes more important. Little prior empirical research has examined the impact of motivation on the performance of technologists--those workers who work primarily with technology in their job. Potential differences between technologists and nontechnologists in organizations which may effect the impact of motivation on performance include: (1) there tends to be a definable and measurable end-point to their tasks; (2) the work of the technologists will have a major impact on a major portion of the organization; and (3) they are preoccupied with things rather than organizational issues (von Heydebrand 1985, Medcof 1985).

This research is examining the applicability of goal setting theory (Locke 1968; Locke and Latham 1990) to technologists and nontechnologists who compose information systems (IS) project teams in an effort to determine whether differences in motivational patterns exist. Prior work in IS on the differences in motivational patterns between IS and non-IS individuals has been inconclusive, with Cougar and Zawacki (1980) concluding that there were significant differences between the two populations, and Ferratt and Short (1986) concluding that there were no differences.

IS project teams provide a unique opportunity to study the differential impact of motivation on performance for these two groups of employees. The research hypothesizes that several moderator variables are important in the goal setting--performance relationship, including goal commitment, task complexity, individual differences, organizational climate, and feedback, and that these moderator variables may result in a different

impact of goals on performance for technologists than for nontechnologists. The individual differences of interest in this study include: need for achievement, locus of control, self-esteem, self-efficacy, and perceived ability (Hollenbeck and Brief 1987).

This research extends prior research on goal setting in several significant ways:

- Goal setting is applied to both technologists and nontechnologists in their natural work environment,
- These subjects are performing real tasks in the IS environment,
- Tasks which are both interdependent and individual, and
- For which there are real consequences for failure to meet the goals.

The research also extends prior motivational research in IS in the following ways:

- It does not classify individuals solely on their organizational reporting relationship, and
- It is grounded in one of the two motivational theories which has shown to produce the most reliable impact on performance (Staw 1984).

The research model, which is based on the goal setting literature (e.g., Locke and Latham 1990), is presented in Figure 1. From this model comes three research questions:

- Will setting difficult and specific goals affect the performance of technologists as strongly as it does for nontechnologists?
- Do other factors such as goal commitment, task complexity, organizational climate, individual differences, and feedback affect technologists in the same way they do nontechnologists?
- Will there be differences in motivational patterns between technologists and nontechnologists?

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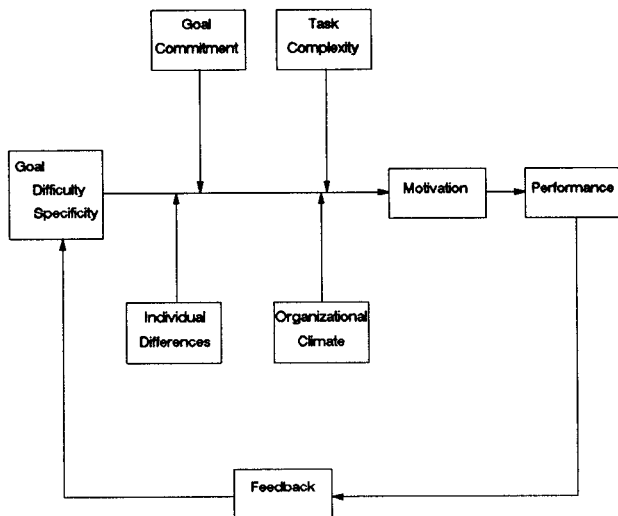


Figure 1. Research Model

The research is being conducted as a field study in several firms in the Twin Cities area. We will have several project teams from each firm, with participation from every member of those teams. Data collection is being conducted through the use of three questionnaires. The first two collect information from project team members at the time their goals are set and at the assessment of their performance on those goals. The third questionnaire collects performance information concerning the project team member from the individual's supervisor. Multiple measures of key constructs (e.g., performance, technologist/nontechnologist) will be taken from these two sources to increase the validity of those measures. The questionnaires are based, to the greatest extent possible, on previously validated instruments. Both regression analysis and LISREL will be used to analyze the data and the adequacy of the research model.

The research results should be a contribution both to the IS literature as it attempts to explain part of the variability in performance of IS individuals and to the industrial/organizational psychology and organizational behavior literatures as it expands knowledge of how goal setting affects technologists and nontechnologists working on real interdependent tasks.

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