Chapter 5

The Collaborative Use of Information Technology: End-User Participation and System Success

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User participation seems especially important in the development of collaborative work systems where the technology is used by a work group to coordinate their joint activities. Users rather than systems analysts are often the best source of information on how they will use information technology to collaborate. It is almost an axiom of systems development that end users should participate in a broad range of activities/decisions, and that they should be permitted to participate in these decisions as much as they want. Despite these widely held beliefs, research has not focused on the differential efficacy of user participation in collaborative versus non-collaborative applications.

Building upon the work of behavioral scientists who study participative decision making, Doll and Torkzadeh (1991) present a congruence construct of participation that measures whether end users participate as much as they want in key systems analysis decisions. Using a sample of 163 collaborative and 239 non-collaborative applications, this research focuses on three research questions: (1) Is user participation more effective in collaborative applications? (2) What specific decision issues enhance user satisfaction and

productivity? and (3) Can permitting end-users to participate as much as they want on some issues be ineffective or even dysfunctional? The results indicate that user participation is more effective in collaborative applications. Of the four decision issues tested, only participation in information needs analysis predicts end-user satisfaction and task productivity. Encouraging end users to participate as much as they want on a broad range of systems analysis issues such as project initiation, information flow analysis, and format design appears to be, at best, a waste of time and, perhaps, even harmful. These findings should help managers and analysts make better decisions about how to focus participatory efforts and whether end users should participate as much as they want in the design of collaborative systems.

INTRODUCTION

A new era of collaborative organizations characterized by lateral leadership and virtual teams is emerging (Pasternack and Viscio, 1998; Ghoshal and Bartlett, 1997). Firms that compete by developing and deploying intellectual assets are finding that their competitive advantage will depend on developing a superior collaborative capability. Collaboration occurs when two or more people interact to accomplish a common goal. Collaboration means that people who work together support each other by sharing their ideas, knowledge, competencies, and information and/or by coordinating their activities to accomplish a task or goal (Hargrove, 1998). Collaborative work systems are defined as applications where information technology is used to help people coordinate their work with others by sharing information or knowledge. In a longitudinal study, Neilson (1997) describes how collaborative technologies such as Lotus Notes can enhance organizational learning.

Knowledge is a social activity. Complex problems can not be solved by specialists thinking and working in isolation, but in coming together through a process of dialogue, deeply informed by human values and focused on practical problems. Today people from all over the world have the capacity to communicate by e-mail and to participate in electronically distributed meetings. Technology has, in most cases, increased the quantity of interactions people are having. But, has it improved the quality of those interactions? To do this will require a shift in thinking and attitudes towards being more creative and collaborative in systems development (Hargrove, 1998).

Can analysts really design collaborative applications that enhance the quality of human interactions without engaging the application's users in the design effort? In other words, should the design of collaborative applications

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