Chapter XI

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 (Ghoshal & Bartlett, 1997; Pasternack & Viscio,
1998). 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). Collabora-
tive 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 cannot 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 itself be a collab-
orative activity? The literature on collaborative systems has focused on: (1) the nature
and capabilities of the software, and (2) its application to specific problems
requiring collaborative interaction. It has largely ignored the issue of user partici-
pation in the design of collaborative applications.

User participation is widely accepted as essential to developing successful
information systems (Barki & Hartwick, 1994; Ives & Olson, 1984; McKeen,
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