

A Review of User Involvement in Information System Projects

Bradford R. Eichhorn, Department of Operations & Supply Chain Management, Cleveland State University, Cleveland, OH, USA

Oya I. Tukul, Department of Operations & Supply Chain Management, Cleveland State University, Cleveland, OH, USA

ABSTRACT

In this study the authors provide a comprehensive literature survey of user involvement in information system projects. Specifically, the authors document and summarize user involvement by identifying studies that investigate user roles and activities, selection of users, type of communications used, and timing and level of their involvement. The authors review papers that employed various research methods and empirical studies whose models incorporated moderating and mediating factors, longitudinal studies, focus groups and case studies. The authors document the conditions favoring selected topics, models and metrics as well as highlight the contradicting results not supporting user involvement. This study constitutes an initial and systematic documentation of user involvement in information system projects and presents the opportunity to further improve the research in this subject area by leveraging findings and limitations of the current literature.

Keywords: Information Systems, Project Management, User Activities, User Roles, User Satisfaction

INTRODUCTION

Background

The identification of critical success factors on information system (IS) development projects has been an on-going effort and has traversed industries, geographies and technologies. Numerous studies have noted that user involvement (UI) and user participation (UP) are significant factors affecting project outcomes (Kappelman, McKeeman & Zhang 2006; Khang & Moe,

2008; Ngai, Law & Wat 2008; LePage, 2009) and an absence of UI has been identified as a factor contributing towards a troubled project (Havelka & Rajkumar, 2006). Although project success is in theory an economic construct, defining the construct is in itself difficult due to the challenge of valuing intangible costs and benefits (Ives, Olson & Baroudi, 1983); a detailed study of this construct is outside the scope of this paper. There is a general assumption that UI is beneficial to project success (Nah & Delgado, 2006; Wagner & Piccoli, 2007; Saleem, 1996)

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even though some studies indicate insignificant or even contradictory findings related to user involvement (McKeen, Guimaraes & Wetherbe, 1994; Ives & Olsen, 1984; Locke, Schweiger & Latham, 1986; Gemino, Reich & Sauer, 2008).

Furthermore, there are many assumptions and hypotheses in the literature regarding UI that are yet to be proved. For example, there is a common assumption among practitioners that users who begin projects with beliefs that the system will be beneficial to them will engage in activities to ensure success (Ginzberg, 1981). As such, the role of the user is shifting from being traditional (push-oriented) to a more crucial pull-oriented, user-driven approach (De Moor, Berte, De Marez, Joseph, Deryckere & Martens, 2010). Thus the user's role can be both a participant and a customer. There are, however, empirical studies in the literature that suggest that this should not be the case, notably (Hartwick & Barki, 1994) and (Ives & Olson, 1984); they employ a wide variety of construct definitions, methodologies and metrics which themselves cause inconsistent findings. Similarly, an early research by Swanson (1974) suggests that the measurement of involvement should be based on their activities whether as a user or as a facilitator of its development. Ten years later, Ives & Olsen (1984) retain that view in their critical study of user involvement. The authors separate the degree of participation from the type of participation but note that there should be a standard measure of user involvement. The Standish Group surveys project success periodically and consistently find that more projects are deemed to be failures than successes. Verner, Cox, Bleistein & Cerpa (2005, p. 226) note that the Standish Group has often cited the lack of user involvement as a contributor to the high number of failures. PM Hut (2009) finds that recent Standish CHAOS reports indicate a long-term trend of increasing project success possibly due to better project management expertise, better training, and better tools and techniques. However, the majority of projects are still classified as failures. Their study claims that a high level of customer

involvement is the best predictor of project success (*ibid*, p. 231).

Another issue in the literature is the choice of terminology used. User Involvement "refers to a subjective psychological state of the individual and [is] defined as the importance and personal relevance that users attach either to a particular system or to IS in general, depending on the user's focus" (Barki & Hartwick, 1989, pp. 59-60). Subsequent research has confirmed this definition and found empirical support for this separate construct (Hartwick & Barki, 1994; Kappelman & McLean, 1992). Similarly, User Participation refers "to the behaviors and activities that the target users or their representatives perform in the systems development process" (Barki & Hartwick, 1989, p. 59). This definition is consistent with the one proposed by Kanungo (1979, 1982) with respect to organizational behavior. Later research also supported this definition using an empirical study (Hartwick & Barki, 1994). Elsewhere, UP is defined as "those democratic processes that enable employees to exercise control over their own work environments and work futures" (Mumford, 1983, p. 48).

A final argument about user participation in information systems development efforts assumes that such participation will provide valuable input to various technical decisions to be made. However, user's participation may have a greater value because those decisions are more socio-technical than purely technical (Damodaran, 1996; Wang, Shih, Jiang & Klein 2006). Recent meta-analysis by He and King confirms that UP may only be minimally-to-moderately beneficial to system development projects with the dominate influence being on attitude and behavioral changes rather than productivity (He & King, 2008).

Clearly, the unorganized and sporadic coverage of user involvement in IS projects, limited scientific studies verifying hypotheses, and inconsistent usage of terminology in this literature prevent robust growth in this area. Our purpose with this study is to alleviate some of these issues by providing a comprehensive

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