Chapter I

The Relevance of Learning Processes for IT Implementation

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Abstract

The starting point of this chapter is the belief that it is neither the quality of the technology, nor that of the individual users, but the interactions amongst people in groups of users concerning a new system that determines the success or failure of IT implementation. Aiming at conceptualisation of the role of group learning in IT implementation, we first develop a theoretical framework based on the experiential learning cycle that includes five processes: collective acting, group reflecting, knowledge disseminating, sharing understanding, and mutual adjustment. Second, we illustrate the roles of learning processes in three case studies. Analysis of the interviews with 98 users of information technologies has revealed a unique function of group learning in the IT implementation. It is shown that group learning emerges immediately after a new IT is introduced to the targeted users; it may take different directions (for or against adoption of the technology); it itself can develop during the IT implementation and either progress or take a turn for the worse. The chapter elaborates on three organisational conditions important for directing the constructive group learning: managerial support issues, structural and nonstruc-

tural group characteristics, and technological features that turn group learning in a positive direction.

Introduction

Almost all modern information technologies (IT) have networked, or collaborative, fragments, and human beings interact with one another while using IT rather than only with the computer, though they might well use computers to do so. These interactions develop within new or existing communities of users, called groups of users in this article. Group interactional processes reflect that groups are developing common understandings of the technology they are forced to (or want to) use. In this chapter, we theorise the multifaceted complexity of IT implementation by looking at it from the perspective of learning processes, specifically from the perspective of experiential learning. We aim to conceptualise how IT implementation develops through learning processes and to provide empirical support for this conceptualisation.

Some aspects of learning have already been discussed in the IT implementation literature, such as reflective group processes (Hettinga, 2002; Schippers, 2003; Tucker, Edmondson, & Spear, 2001); sharing understanding (Mulder, Swaak, & Kessels, 2002); and collaborative knowledge building (Stahl, 2000). In an extended version of the structurational perspective, Orlikowski (2000) proposes looking at "communication, mutual coordination, and storytelling" as important sources for engagement with the system (p. 411).

Although some feeling for the topic now exists, and recent research has emphasised the importance of certain elements of learning for IT implementation, systematic insights are still poor.

We start from a definition. Learning in IT implementation is understood as all the interaction processes through which users develop their understandings about a newly introduced system, and that help them in adopting it (Bondarouk & Sikkel, 2005). With this we emphasise that we look at the implementation of IT from its introduction to the targeted employees and until its successful use. Therefore, our main research question is formulated as: What is the role of learning processes in the implementation of IT from its technical installation until its successful use?

To answer this question, in the following subsections we elaborate on the conceptualisation of learning in IT implementation from the perspective of experiential learning (Kolb, 1984). After that we discuss the research methodology and present empirical results from three case studies. We finalise with discussion, conclusions, and remarks about future research.

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