



Chapter XVII

Learning Supported Decision-Making: ICTs as Feedback Systems

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ABSTRACT

The biggest challenge for any organization is managing the disperse nature of knowledge across a diverse set of knowledge carriers. The role of ICTs in supporting and extending the organizational memory is of particular concern. This chapter contributes to our understanding of the challenges the Digital era presents us by proposing a socio-technical framework, which emphasizes feedback as the critical link connecting social systems and technical structures. The main thrust of the framework is the alignment of social structures and social actors in ways that seek to integrate different modes of learning with different models of decision-making. This integration is to be supported by a range of decision-learning structures (in ICT systems), which create different feedback levels. These feedback levels are the main focus of the chapter which makes a valuable contribution in extending debates of learning, decision-making and their relationship demonstrating the inherent challenges of the digital era in using ICTs as social as much as technical tools.

INTRODUCTION

A trend that is common to many organizations in the post-industrial society (Bell, 1976) is the volume, dispersion and complexity of the information available that has a significant bearing on efforts to 'manage' knowledge and support organizational and individual learning to meet strategic objectives. The 'social life of information', as Brown and Duguid (2000) eloquently demonstrate is affected by a multitude of social forces such as: economic conditions, international forces, technology and changing assumptions. While Information and Communication Technologies (thereafter ICTs) are predominantly seen as tools supporting information management, their role in relation to learning and knowing in organizations is still embryonic. A review of the decision support literature, shows that a number of methodologies (predominantly ICT based) have been proposed in an effort to overcome the inherent subjectivity in the process of decision-making. For example, many decision support tools seek to find ways in which objective information can be successfully collected, categorized and distributed to support decision-making. Decision-making can be supported both by ICT-based decision support systems, as well as the dominant assumptions and values that determine the practices of a community of decision makers.

This point is critical in the analysis the chapter seeks to pursue, because it seeks to capture the dynamic interactions between the human and technological dimensions and to highlight the significance of feedback systems as mechanisms that convey powerful cultural meanings that carry collective knowledge in a codified form giving sense to the actions taken in relation to making a decision. Therefore feedback systems reflect the social structures that support information flows in organizations in the way existing lessons learned are codified, stored and distributed among members of a community.

The objective of this chapter, therefore, is to propose a socio-technical framework for supporting decision-making by exploring how learning modes facilitate knowledge transfer and feedback in relation to ICT-assisted knowledge management initiatives. ICTs as feedback systems that act as knowledge codification devices reveal both the sense-making process shaping individual interpretations, as well as the knowledge structures that form part of the organizational memory. Therefore, understanding how decision makers learn to make decisions would be of considerable value, as it would help highlight more forcefully how the subjectivity in the decision-making process develops and how it can be potentially worked with to enhance the effectiveness of decisions. Essentially learning how to take decisions is akin to saying learning how to learn. This view locates as central to the effort to support decision-making the question of whether learning could be one of the purposes of making decisions and indeed if there is a 'best' way of learning in relation to decision-making.

For the purpose of this analysis decision-making is defined as:

A learning-supported process which is embedded in the learning culture and climate of the social context in which it takes place, has the capacity to evolve through the processing of information and the building of knowledge by developing interpretations based on the evolving organizational memory.

The discussion begins with an overview of the role of learning, knowledge and sense-making in the context of decisions. The analysis then examines the relationship

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