Available online at www.sciencedirect.com
SCIENCE DIRECT®
Information and Organization 16 (2006) 27–55
INFORMATION AND ORGANIZATION
www.elsevier.com/locate/infoandorg

Negotiating ICT development and use: The case of a telemedicine system in the healthcare region of Crete

Panos Constantinides *, Michael Barrett

The Judge Institute of Management, University of Cambridge, Trumpington Street, Cambridge CB2 1AG, UK

Received 2 August 2004; received in revised form 4 July 2005; accepted 15 July 2005

Abstract

Recent research on the development and use of information and communication technology (ICT) has focused on the emergent use of technology in practice and the multiplicity of outcomes being simultaneously negotiated by different groups and individuals. In this paper, we seek to understand this emergent process by examining the interrelationship between the context(s) in which ICTs are introduced, the ways in which ICTs are enacted in practice, and the role of different technological artifacts. We pursue the value of these conceptual developments in an interpretive case study on the introduction of a telemedicine system in the healthcare region of Crete, Greece. Some key implications arising from the case study refer to the relationship between power relationships and organizational change; the relationship between existing work practices and resistance to ICT-mediated change; and the role of different artifacts in negotiations of power, as well as in processes of community formation.
© 2005 Elsevier Ltd. All rights reserved.

Keywords: ICT; Organizational change; Telemedicine; Boundary objects; Process research; Interpretive case studies

* Corresponding author. Tel.: +44 1223 339700; fax: +44 1223 339581.
E-mail addresses: pc262@cam.ac.uk (P. Constantinides), m.barrett@jims.cam.ac.uk (M. Barrett).

1471-7727/$ - see front matter © 2005 Elsevier Ltd. All rights reserved.
doi:10.1016/j.infoandorg.2005.07.001

1. Introduction

Recent research on information and communication technology (ICT) development and use has focused on practice-level explanations of the interplay between technology and organizational continuity and/or change (Orlikowski, 2000). The underlying argument is that we should move away from a view of ICT as fixed or embedded in a set of organizational and technological structures and towards a focus "on human agency and the open-ended set of emergent structures that may be enacted through recurrent use of a technology" (Orlikowski, 2000, p. 412). More recent work has built on this practice perspective to also recognize the importance of social influences on individual enactments of technology use over time (Boudreau & Robey, 2005). In addition, some researchers drawing from the broad field of Science and Technology Studies have argued that, in any given ICT project, there are several outcomes simultaneously being negotiated by different groups and individuals (Bowker & Star, 1999; Star & Ruhleder, 1996). In this view, people are members of multiple communities simultaneously, which produces precarious outcomes for the relationships between different groups and individuals, their practices, and choice of technological artifacts, including ICT (Bowker & Star, 1999).

This paper seeks to contribute to a richer understanding of ICT development and use by recognizing the value of practice-level explanations while drawing on multiple perspectives and seeking to understand the broader network of interactions between different groups and individuals. This objective is pursued by examining the interrelationship between the context(s) in which ICTs are introduced, the ways in which ICTs are enacted in practice by different groups and individuals, and the role of different technological artifacts in this process. First, we examine the changing role of different contextual elements, such as political reforms in the broader environment where the ICT project unfolds. Second, we examine the structures of reference that different stakeholders draw upon to make sense of, and act in, their work and social contexts. Structures of reference refer to the underlying meanings and intentions that people have about an object, action or event, which are constantly being shaped in light of new knowledge brought into their communities, changing contextual elements, and new and existing artifacts. Finally, we examine the changing role of different artifacts such as the existing technological base and other specialized objects. These artifacts may often play a key role in ICT projects, either by reinforcing the need for change or by being employed as a means for resistance and continuity (of existing work practices) by different groups and individuals. We argue that the interplay between contextual elements, the structures of reference of different participants, as well as their choice of artifacts follows an ecological evolution where diverse (and often contradicting) outcomes are simultaneously being negotiated at different levels and points in time. We will pursue the value of these conceptual developments in an interpretive case study on the introduction of a telecardiology collaboration workspace between primary healthcare centers and a district hospital in the healthcare region of Crete, Greece.

The rest of the paper is organized as follows. In Section 2, we discuss our conceptual foundations by drawing on existing knowledge on ICT development and use.

Download English Version:

https://daneshyari.com/en/article/555355

Download Persian Version:

https://daneshyari.com/article/555355

Daneshyari.com